

Final Environmental Impact Report



Blue Line Station Modernization Project

EOEA # 8772

Prepared For:

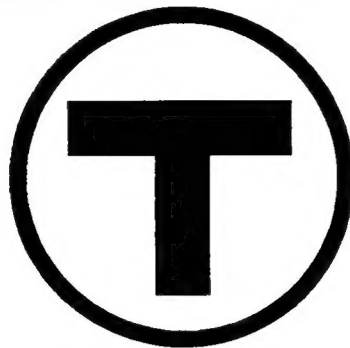
Massachusetts Bay Transportation Authority

Prepared By:

Fay, Spofford & Thorndike, Inc.
Engineers.Planners
20 Park Plaza
Boston, MA 02116

October 1993

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In Association With:

**Acentech Corporation, Inc. - Noise
and Boston Affiliates, Inc. - Historic and Archaeological**

October 1993



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APPENDIX

List of FEIR Recipients

SEPARATE TECHNICAL APPENDICES

In addition, two (2) copies of the following separate Technical Appendices are available for review at the State Transportation Library, 10 Park Plaza, Boston, MA.

These include:

5. Traffic (DEIR)
 - Automatic and Manual Count Summaries
 - CINCH Analysis Sheets
 - Blue Line Passenger Survey Summary Memos
6. Noise (DEIR)
7. Historical and Archaeological - MHC Chapter 9, Sections 26-27c **Permit Application and Research Design for a Reconnaissance Archaeological Survey of the Blue Line Station Modernization Project - Bowdoin To State - Boston, MA** (DEIR, Boston Affiliates, Inc., December 9, 1992)
8. Downtown Station Pedestrian Study Analyses (FEIR)
9. October 4, 1993 Letter from Massachusetts Historical Commission to MEPA Concurring with the Archaeological Survey Findings and Recommendations

Reconnaissance Archaeological Survey of the Blue Line Station Modernization Project - Bowdoin To State - Boston, MA (FEIR, Boston Affiliates, Inc., July, 1993)
10. CTPS Shuttle Bus Service Air Quality Analysis (December 27, 1991 Memorandum)

Or contact: MBTA Blue Line Station Modernization Project
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Attn: Mr. William J. Howell, Jr., Project Manager

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***CERTIFICATE OF THE SECRETARY
ON THE DRAFT ENVIRONMENTAL IMPACT REPORT***

Ⓣ Massachusetts Bay Transportation Authority
Blue Line Station Modernization FEIR



The Commonwealth of Massachusetts
Executive Office of Environmental Affairs
100 Cambridge Street, Boston, 02202

May 14, 1993

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CERTIFICATE OF THE SECRETARY OF ENVIRONMENTAL AFFAIRS
ON THE
DRAFT ENVIRONMENTAL IMPACT REPORT

PROJECT NAME : Blue Line Station
Modernization Project
PROJECT LOCATION : Boston, Revere
EOEA NUMBER : 8772
PROJECT PROPONENT : Massachusetts Bay Transportation
Authority
DATE NOTICED IN MONITOR : March 9, 1993

The Secretary of Environmental Affairs herein issues a statement that the Draft Environmental Impact Report submitted on the above project adequately and properly complies with the Massachusetts Environmental Policy Act (G. L. c. 30, s. 61-62H) and with its implementing regulations (301 CMR 11.00).

Overview

The Blue Line Modernization Project proposes to improve rapid transit stations in downtown Boston, East Boston, and Revere. The stations at Bowdoin, Government Center, State Street, Maverick, Orient Heights, Suffolk Downs, Beachmont, Revere Beach, and Wonderland will be affected by the project. Barrier free access, platform lengthening for six-car trains, new and upgraded support systems, and infrastructure improvements have been planned. As part of the project, Bowdoin Station will be closed and new headhouses will be added at the Government Center Station. A temporary, one year closure of the stations at Suffolk Downs, Beachmont, Revere Beach, and Wonderland is also proposed during the replacement of the Winthrop Avenue viaduct at Beachmont Station.

In concept, the plan to modernize the Blue Line rapid transit stations has widespread appeal - and this is reflected in the comments. The diverse concerns with the project generally relate to the impacts of various aspects of the plan on the built

environment - and this too is reflected in the comments. I am pleased that the DEIR review has attracted thoughtful commentary, and I want to acknowledge the MBTA for its outstanding outreach program, which contributed significantly to the high level of public participation.

In order to take full advantage of the information developed during the review process, I urge the MBTA and its consultants to revise the proposed modernization plan and impact mitigation program by incorporating all appropriate recommendations and ideas, which have been provided in the oral and written comments and herein. I would also ask specifically that the MBTA evaluate the siting, design, and maintenance issues, relating to the downtown headhouses, that have been raised in the comments from the City of Boston agencies identified at the close of this Certificate.

The Draft EIR states (p. III-40), "The Blue Line Modernization Program will provide a maximum 50 % increase in the capacity of the Blue Line to accommodate higher levels of transit use." This change alone is significant. Taken together with the multi-faceted station upgrade plans, the impacts of the Blue Line Modernization Program are both localized and system-wide. Given the magnitude of the issues relating to the project that need to be addressed, the Final EIR should be a more focused and detailed report, in terms of the relationships between potential impacts and opportunities for mitigative measures. Commitments to a strengthened, and very specific mitigation program, should be an integral part of the FEIR. Contingency planning should also be included in the proposed plan, where applicable.

Finally, the FEIR report should be redirected in order that it will meet the objectives established for EIRs in the MEPA regulations. Although the DEIR provides a better and more complete understanding of the station modernization project than was provided in the ENF review, the analyses in the report have been developed and presented so as to reinforce the original plan described in the ENF. Often, reasonable alternatives for resolution of an issue have been disregarded without adequate explanation. Furthermore, the report has not conceived of many new ideas for improving the plan in ways that will minimize impacts on the diverse population of people who will be affected by this project. The goal for the FEIR will be to revisit the data and analyses for additional opportunities to make the proposed project as suitable as possible for the fully developed environment, both in terms of the new structures proposed and the transportation interruptions anticipated, during the multi-year

construction phases. If alternatives are not selected, then it should be clear that these alternatives are inferior to the chosen plan. To that end, the mitigation commitments, and management commitments during construction to minimize impacts, should be emphasized.

Capacity Increases

A fifty percent increase in passenger capacity is the single, greatest change proposed by this project. Phasing in the use of six-car trains, and increasing headways between trains will help to control the impacts related to the Blue Line expansion in capacity. If demand for service follows the projections made by CTPS, then there will be no immediate need to add parking when six-car trains are brought on line. However, the MBTA should be prepared to deal with the parking issues. The agency should make specific commitments for ridership monitoring, and at the same time, move forward with plans for the additional parking so that parking availability will keep pace with the future transit demand.

Although the noise impacts of six-car trains were not measured to be significantly different from four-car trains, the noise impact measurements in the DEIR and the volume of comments from abutters demonstrate that the noise effects of the project on residents is a problem that needs to be addressed. A proposal to deal with the noise issues should be provided in the FEIR for public consideration and comment. The MBTA should make an effort to accommodate any necessary remediation for the noise issues timely with respect to the Blue Line Station Modernization, even though the most significant noise impacts are not directly linked to this project.

Proposal for Bowdoin Station Closure

Comments from several agencies within the City of Boston have recommended strongly that the timing of the Bowdoin Station closure be closely linked with the Cambridge Street extension of the Blue Line to Charles Street. This solution would be ideal; the impacts to the affected ridership population, and in particular the elderly patients from Massachusetts General Hospital, would be minimized. Thus, the MBTA should reconsider the station closure plan with this goal in mind. As proposed in

the DEIR, Bowdoin Station is due to be closed at the end of 1999 and the Charles Street connection is estimated by 2010. The FEIR should consider ways to compress this gap in time.

A major limitation, which is given as a key reason for closure of Bowdoin Station, is the lack of space outbound for six-car trains. Since six-car trains are not expected to be needed until 2010, a delay in closure until that time would appear to be possible. Even if six-car trains were required for a short period prior to the completion of the Charles Street link, the DEIR appears to indicate that the outbound platform can accommodate six-car trains. Thus, it may be possible to combine the outbound and inbound boarding operations at the inbound platform for a short duration. Other commenters had suggested ways to continue to provide service at Bowdoin. These ideas should be examined, as well.

Impacts from Station Closures during reconstruction of the Beachmont Viaduct

The DEIR analysis of the effects of closing the Blue Line to service west of Orient Heights, and the discussion and rationale for the interim busing plan to replace the lost service, leaves many questions unanswered. Among the most important questions are the following. Can this plan be improved to minimize the impacts on Orient Heights station? Is the proposed shuttle bus program the best possible plan to ensure that transit ridership diversion to other modes is minimized? The comments on the DEIR show that impacts from the station closures have not been minimized to the greatest extent possible. Moreover, the DEIR has not approached the problem of lost patronage from the perspective of providing the best possible replacement service: one that minimizes the time and aggravation associated with the proposed multi-modal, car-to-pedestrian-to-bus-to pedestrian-to-train trip.

Commenters have offered suggestions which would appear to improve upon the proposed interim service replacement plan. These ideas and others suggested herein should be investigated in the FEIR, including the following:

1. The transit ridership data shows that Wonderland is the highest volume station, of those proposed for temporary closure. Riders from Wonderland also have to travel the furthest distance to the Orient Heights Station. Thus, there is a need to investigate

opportunities for a separate, express busing plan for Wonderland commuters to limit the delays and interruptions due to frequent stopping at all of the interim stations. The FEIR should revise the unspecified express bus plan in the DEIR with a more definite plan that offers a variety of origination and destination points. The FEIR should consider shuttle bus service from the Lynn Garage to Wood Island, as has been suggested by several commenters. The report should also consider bus service from the parking lot areas on both sides of North Shore Road at Wonderland, in order to reduce total passenger time from the origination point to the final destination. By staggering bus origination and destination points, the traffic impacts at Wonderland and Orient Heights will also be reduced.

The FEIR must provide a comparative assessment of the impacts of the proposed plan and the alternative busing plan described, if the DEIR plan is retained.

2. All westbound commuters will be required to use the narrow stairs and overpass at the Orient Heights station in order to board outbound buses. At present, the stairs and walkway are a point of pedestrian congestion. This situation will worsen during the interim service period. To address the problem, the MBTA should consider proceeding with the proposed upgrade of the stairs and pedestrian bridge, and the addition of elevators, prior to the temporary station closures. Alternative means of access to the buses should be identified, if station improvements cannot be made. The alternative of adding buses on Barnes Avenue would relieve the problem for commuters, but it would worsen the impacts on the residential homes at that location.

3. Although the DEIR provides assurances that the 1983 busing program gives the MBTA the experience necessary for the proposed program, the report has not shown that the two services are comparable in terms of numbers of passengers and equipment, stations involved, and duration. How did the MBTA deal with serious weather conditions? As noted in the comment from the BRA, since transit trains are affected to a lesser degree by inclement weather, this issue is of concern. If ridership is significantly higher now than it was in

1983, the MBTA should reconsider the logistics of providing bus service to a larger number of people.

The FEIR should consider ways to phase in the busing to give the agency ample opportunity to rework the program before adversely impacting all potential riders. It seems obvious that if a reliable and adequate service cannot be attained early, ridership will decrease. Given that the MBTA's survey showed that 33 percent of today's riders will choose an alternate transit mode to busing (15 percent will choose private automobiles), the focus should be redirected toward offering a replacement service that attracts ridership. To that end, the FEIR should very seriously consider the recommendations in the Metropolitan Area Planning Commission comment, particularly the recommendation that the MBTA use pricing incentives to promote the interim service and alternative transit modes, such as commuter rail.

4. The Point of Pines Beach Association comment offers a number of suggestions, including an alternate bus route (Item # 6) that should be considered as a solution that will minimize traffic impacts on the preferred bus route.

In addition to evaluating ways to improve the replacement service, the FEIR should explain in greater detail the following issues that were briefly mentioned in the DEIR:

1. The MBTA has proposed "real time" adjustments for recurring problems with the temporary bus service (p. III-5). What constitutes a "real time" adjustment? Is there an opportunity to anticipate potential problems, in view of the fact that the MBTA has had experience with this type of service in 1983? As mentioned earlier, contingency planning should be incorporated into the proposed plan. The concern here is that the entire plan is balancing the needs of commuters and the needs of the communities impacted. If not enough thought is given to exigencies, and "on the spot" adjustments are made to the service, there could be an unreasonable shift in that important balance, whereby either commuters or neighbors would be unreasonably impacted. Contingency planning offers a technique to keep that balance in check and to alert the public as to how unforeseen problems will be handled.

2. The DEIR optimistically promises that parking demand will not increase at the stations which will remain open during shuttle bus operations. The report also indicates that enforcement of parking rules will deter any unanticipated parking problems. Is the MBTA accepting the responsibility for enforcement, due to potential parking impacts from the project? The FEIR should be clear, in terms of the agency's commitment.

3. The DEIR indicates that the temporary station closures are scheduled for a 12 month period. How accurate is that estimate likely to be? Clearly, if two to four months could be shaved from the closure period, then winter weather problems could be avoided. On the other hand, if the closure has the potential to be protracted, then the conflicts with the CA/THT project might be exacerbated. The FEIR should give the reviewer insight into the techniques that will be used to keep the closure period to an absolute minimum.

Conflicts with the Central Artery/Third Harbor Tunnel Project

As stated in the Metropolitan Area Planning Commission comment, "The timing of the initiation and completion of the Blue Line work in Revere and East Boston is critical. The proposed schedule for station closure from the spring 1994 to the spring 1995 allows for the Blue Line to return to full operation before the Central Artery Project work on the Route 1A interchange is scheduled to begin." Even so, the closure will overlap with some proposed CA/THT construction activities and those activities will necessitate detouring and delaying of vehicle traffic. As a result of the CA/THT traffic impacts, there may be a shift in the existing transportation mode choice away from private vehicles. To the degree that it is possible, the FEIR should anticipate this effect and consider the extent to which the proposed interim service can accommodate more intensive use during peak volume periods.

Impacts on Historical Resources

The comment from the Massachusetts Historical Commission identified concerns about the size, design, materials, and placement of the new State Street headhouses. Similar concerns are reflected in the comments from the agencies in the City of

EXECUTIVE SUMMARY

Ⓣ Massachusetts Bay Transportation Authority
Blue Line Station Modernization FEIR

EXECUTIVE SUMMARY

Introduction

This document, EOE # 8772, has been prepared for the Blue Line Station Modernization Project. Figure S.1 is an overview of the Project Area.

This document is organized into four sections. Section I, *Project Description and Affected Environment* contains an overview of the Project and discusses elements of the Affected Environment which commenters on the DEIR suggested required clarification. Section II, *Environmental Impacts* addresses only those impacts which have changed from the DEIR. Section III addresses *DEIR Comments and Responses*. Section IV highlights MBTA *Mitigation Commitments*. Separate Technical Appendices 8 (Downtown Station Pedestrian Study Analyses), 9 (Archaeological and Historical), and 10 (CTPS Shuttle Bus Service Air Quality Analysis) are available from the MBTA.

Following the publication of the Certificate on the Draft EIR (DEIR), the MBTA met with the MEPA Project Reviewer on June 10, 1993 to discuss comments on the DEIR as well as the general format and content of this FEIR. At that meeting, the MEPA Project Reviewer recommended that the Final EIR (FEIR) should not be an edit of the DEIR, but rather should address changes to those sections of the DEIR which were commented upon and provide responses to comments received. This FEIR has been prepared in accordance with this recommendation and sections of the DEIR which have not changed are incorporated by reference.

A brief history of the environmental review process for this project follows.

On October 15, 1991, the MBTA filed a Notice of Project Change to the Blue Line Station Modernization Project Environmental Notification Form submitted in August, 1991. Following receipt of correspondence on the

Notice of Project Change, the Secretary of the Executive Office of Environmental Affairs, on November 25, 1991, issued a Certificate requiring the MBTA to prepare and submit an Environmental Impact Report in accordance with the Massachusetts Environmental Policy Act (MEPA) General Laws, Chapter 30, Sections 61-62H of the MEPA regulations 301 CMR 11.00.

Availability of the DEIR was noticed in the Environmental Monitor on March 9, 1993. During the DEIR comment period, the MBTA requested, and was granted, an extension to the comment period to hold three public meetings on the Project. A Certificate on the DEIR was issued on May 14, 1993.

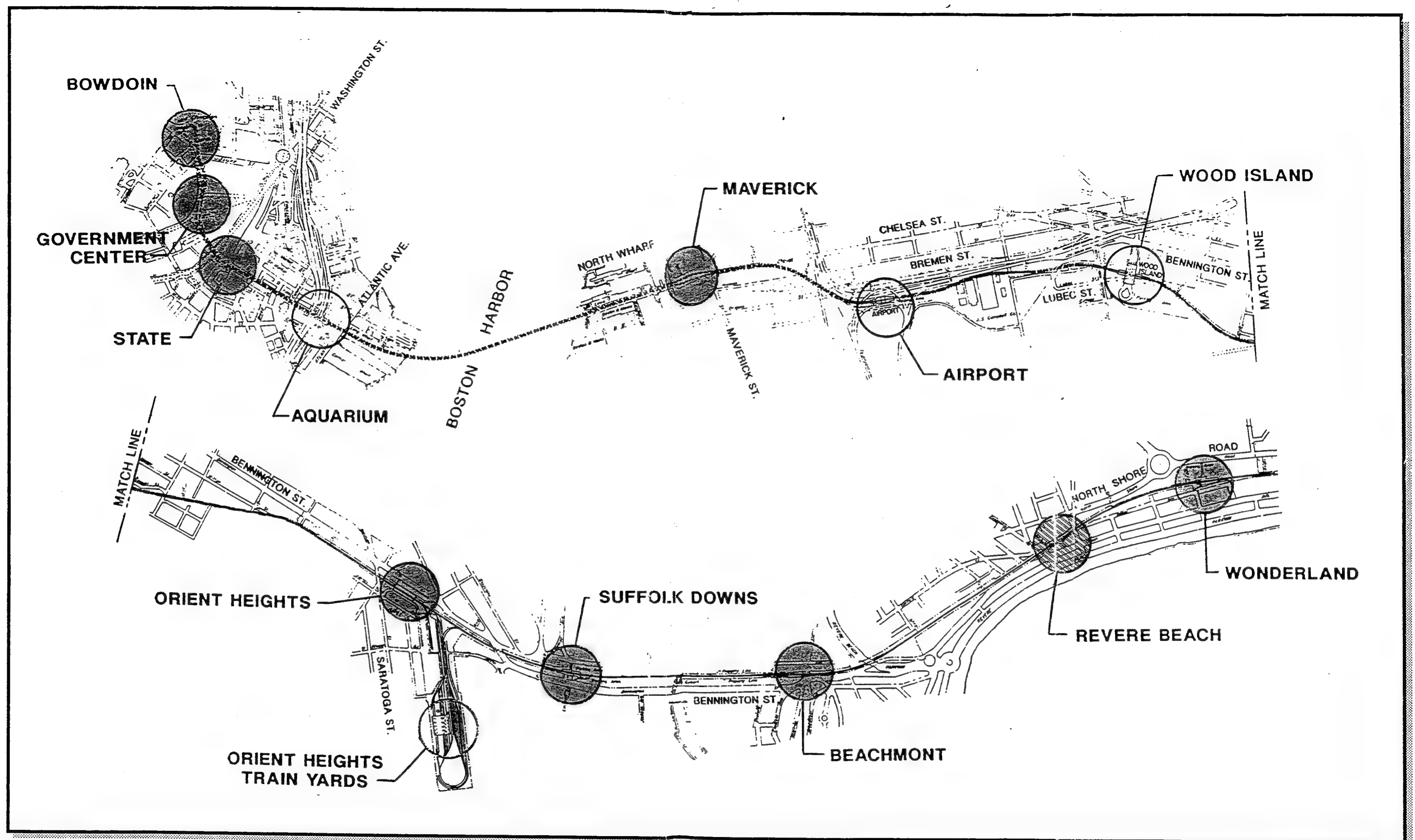
The Secretary's Certificate cited several concerns to be addressed in the FEIR.

These concerns included:

- ✓ Capacity increases (including noise impacts)
- ✓ Proposal for Bowdoin Station closure (including traffic, pedestrian, and station maintenance impacts at downtown stations)
- ✓ Impacts from station closures during reconstruction of the Beachmont viaduct
- ✓ Conflicts with the Central Artery/Third Harbor Tunnel Project
- ✓ Impacts on historical resources
- ✓ Construction impacts
- ✓ Miscellaneous comments

Status of Permits Required




A total of four Federal and State permits are required by this project, as noted in the DEIR.



NO SCALE

SOURCE:
MBTA Blue Line Eight Car Train Feasibility Study,
November, 1990.

KEY

-  Station Impacts Addressed in this Study
-  Construction Period Impacts Addressed in this Study
-  Locations Not Addressed in this Study

EXISTING MBTA BLUE LINE STATIONS

Ⓘ Massachusetts Bay Transportation Authority
Blue Line Station Modernization FEIR

Figure S.1

Status of Permits Required (Cont.)

Proposed State Station improvements require three permits. Two are required from the Massachusetts Historical Commission -- a permit to conduct an archaeological investigation under Massachusetts General Laws Chapter 9, Sections 26-27c has been obtained; a permit to construct in a historically sensitive area is being sought under Massachusetts General Laws Chapter 254. A similar Section 106 permit to construct in an historical area is being sought from the U.S. Department of the Interior. For the tunnel portion of Maverick Station improvements, a Chapter 91 permit will be sought from the Massachusetts Department of Environmental Protection, Division of Wetlands and Waterways, as required under the Massachusetts Waterways Act. All permits will be obtained prior to construction of improvements. A Notice of Intent and Order of Conditions is being sought from the Boston Conservation Commission for landscaping work in a 100-year floodplain at Suffolk Downs Station.

The MBTA intends to use all available resources, including Massachusetts State bond funding along with Federal Transit Administration funding, to finance this project.

Community and Agency Participation Process

The MBTA has been working closely with the cities of Boston and Revere to implement a public information process to update and inform the public about the status of the overall Blue Line Modernization Project.

Between April 1991 and September 1993, the MBTA has held 48 meetings concerning the Blue Line Station Modernization Project as part of its continuing public information process. This included 18 public meetings, the following three of which were held to discuss the DEIR and to receive comments on it prior to the due date for comments:

- ✓ April 7, 1993 - Midday meeting in downtown Boston.
- ✓ April 8, 1993 - Evening meeting in the City of Revere.
- ✓ April 21, 1993 - Evening meeting in East Boston.

In addition, since the publication of the DEIR, the MBTA has held five additional meetings, four with local agency staff in the City of Boston and one with local officials in the City of Revere.

The MBTA is committed to continuing this public participation and agency coordination process throughout the entire Blue Line Station Modernization Project.

Purpose and Need

The MBTA proposes to implement a ± \$434.2 million Blue Line Station Modernization Program affecting all twelve existing Blue Line Stations in the Cities of Boston and Revere (Refer back to Figure S.1).

The Blue Line has had a long and fascinating history. Its rail corridor evolved in stages from a narrow gauge rail, to light rail, and finally to a rapid transit rail line.

Its tunnels and stations incorporate a variety of architectural styles and designs from the early to mid 20th century.

Unfortunately, the needs of Blue Line stations have been addressed sporadically, on an 'as-needed' basis. Some stations have not been upgraded in nearly forty years. At the present time, many Blue Line stations are run-down, uninviting, and poorly lighted. Some are in need of structural repairs. Blue Line stations do not comply with existing Federal and State legislation pertaining to station accessibility.

Presently, 5 of the 12 existing Blue Line stations are only capable of accommodating four-car trains. Four-car platforms limit peak line capacities to a level close to existing demands and result in crowded trains during peak commuter hours.

Implementation of the proposed Blue Line Station Modernization Program is, in and of itself, a major form of environmental impact mitigation. The Program will produce long term regional benefits such as improvements in air quality and reduced traffic congestion. It will also enable the Blue Line to fully comply with the Americans with Disabilities Act (ADA) of 1990 and local Massachusetts Architectural Access Board requirements, so that all Blue Line stations will be accessible to persons with physical disabilities.

The future ability of the Blue Line to accommodate six-car trains will also provide the MBTA with significant operational flexibility. Such operational flexibility will not only benefit passengers by reducing peak demand crowding levels, but will reduce future MBTA operating costs. For example, the MBTA will be able to schedule up to six-car train sets during major sporting events and special events such as 'First Night' or the recent 'Tall Ships' celebration.

Furthermore, existing and future Blue Line passengers will benefit from clean, well-lit, functional, and secure stations.

Blue Line passengers will be able to experience less-crowded trains as well as the best quality of service in the history of the line.

The Blue Line Station Modernization Project is consistent with several long range MBTA Board of Directors policy priorities and systemwide operations planning goals. Among applicable systemwide operations and planning goals are:

- ✓ Upgrade MBTA facilities and vehicles to improve customer service.

- ✓ Improve service reliability and system safety.
- ✓ Operate existing service in a more efficient manner - more responsive to consumer needs.
- ✓ Provide public transportation infrastructure support to build Central Artery/Third Harbor Tunnel.

The Blue Line Station Modernization Project is also consistent with target goals established by the Clean Air Act State Implementation Plan (SIP), the mitigation program outlined in the Final Supplemental Environmental Impact Report/Statement for the Central Artery/Third Harbor Tunnel (CA/THT) Project, and the subsequent Memorandum of Understanding between the Project Proponents and the Conservation Law Foundation and the 1,000 Friends of Massachusetts.

Funding constraints ultimately will dictate the speed at which Blue Line Station Modernization Program improvements are achieved. The ultimate goal of the program is to meet applicable requirements established by accessibility, clean air, and other legislative mandates and agreements.

Project Description and Changes Since the DEIR

Since the publication of the DEIR, no major project changes have occurred in the description of the completed Project. The design of future headhouses at State and Government Center will, however, be closely coordinated with City of Boston agencies to incorporate concerns raised about future headhouse locations, designs, and maintenance requirements. Final headhouse designs and maintenance characteristics will be subject to City of Boston concurrence.

In response to comments received on the DEIR, the MBTA is modifying the description of proposed temporary transit services during

the one-year closure of the Blue Line stations between Wonderland and Suffolk Downs Stations. At the outset of this closure, the MBTA will:

- ✓ Reduce the number of peak hour shuttle buses by 15 percent compared to the frequency described in the DEIR.
- ✓ Improve alternative local bus services on the 440 bus route series by providing connections to and from Wood Island Station.
- ✓ Encourage increased use of the Lynn Station/garage during the one-year period (See Mitigation Summary at the end of this section).

This FEIR addresses construction and post-construction impacts associated with 8 of the 12 stations to be modernized. Aquarium, Airport, Wood Island, and Revere Beach stations are also being addressed in the overall Blue Line Modernization Program. These, however, have already received all necessary environmental clearances. Aquarium, Airport, and Wood Island Stations are being addressed in coordination with the Central Artery/Third Harbor Tunnel Project. Revere Beach Station modernization improvements were permitted separately as an early action project.

Stations addressed in this EIR include:

- ✓ Bowdoin Station
- ✓ Government Center Station
- ✓ State Station
- ✓ Maverick Station
- ✓ Orient Heights Station
- ✓ Suffolk Downs Station
- ✓ Beachmont Station
- ✓ Wonderland Station

Beachmont and Wonderland Stations are located in the City of Revere; all remaining stations are located in the City of Boston -- either in downtown Boston or East Boston.

Generally, the Blue Line Station Modernization Program addressed in this EIR includes the following elements:

- ✓ Blue Line noise mitigation measures.
- ✓ Barrier-free access to all Blue Line Stations in accordance with Federal and State Laws.
- ✓ Platform lengthening at State, Suffolk Downs, and Wonderland Stations to accommodate six-car trains.
- ✓ Structural and noise reduction improvements to existing deteriorating conditions at Beachmont Station.
- ✓ Improvements to Maverick Station including waterproofing of the Blue Line tunnel under Lewis Park and restoration of unused platforms.
- ✓ Construction of two new Blue Line headhouses (i.e., station entrance/exits) at Government Center Station, one of which will be fully-accessible to all potential Blue Line riders. At the end of the program, Bowdoin Station is to be closed and an end-of-the-line ventilation shaft will be installed at the existing Bowdoin Station entrance.
- ✓ Two new entrance/exits at State Station to improve egress from the Blue Line and make the station safer and accessible.
- ✓ Station improvements to provide safer, cleaner, and brighter facilities with reduced maintenance requirements including:
 - ☐ Installation of emergency power generators
 - ☐ Security
 - ☐ Fare collection
 - ☐ Headhouse and platform lighting

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- ☐ ADA-compliance features such as tactile platform edges, curb cuts, special signs for visually challenged passengers, special telephone lines, etc.
 - ☐ Information signs and graphics
 - ☐ Acoustic treatment
 - ☐ Public address systems
 - ☐ Corrosion protection
 - ☐ Unit substations
 - ☐ Modern, secure bicycle storage facilities at outlying Blue Line Stations
- ✓ Related station improvements throughout including traction power, signal, and ventilation upgrades as well as related infrastructure improvements including track replacement from Bowdoin to Airport.

Pending the availability of adequate funding, construction of the Blue Line Station Modernization Program elements addressed in this FEIR is expected to occur between 1994 and the year 2000 (Refer to Figure I-8 in Section I).

The MBTA projects operational savings from the flexibility to operate six-car train sets. These savings are expected to offset additional fare collection operating costs related to the new headhouses at State and Government Center Stations.

Summary of Public Comments Received on the DEIR

Following the publication of the DEIR, the MBTA organized and held three public meetings during April, 1993 to solicit public comments on the DEIR. Meetings were held in downtown Boston, East Boston, and Revere, MA.

During these meetings, and subsequently in written comments to the Secretary of Environmental Affairs, most commenters

indicated their broad general support for the Blue Line Station Modernization Project.

Several concerns, however, were expressed verbally and in writing about the Project. Noise and vibration impacts were, by far, the most frequently cited public concern. Most of the noise-related comments dealt with the severity of existing and future noise impacts of the Blue Line in East Boston and the City of Revere. Other frequently-cited comments included the future closure of Bowdoin Station, pedestrian impacts and headhouse design/maintenance issues at downtown Boston stations, and the need to explore alternative MBTA services during the one-year Blue Line shutdown between Orient Heights and Wonderland Stations. Comment letters and responses are provided in Section III of this FEIR.

Summary of Environmental Effects and Alternatives

Capacity Increases

Refer to Sections II.1.A and III.3.A of the DEIR for the analysis of existing and future Blue Line train capacities.

Blue Line equipment and station requirements are related more to hourly capacities than daily capacities. At present, four-car Blue Line trains have a maximum hourly peak direction line capacity of 3,360 seated passengers and 4,240 standees -- a total of 7,600 passengers per hour per direction.

During 1991, peak direction Blue Line passenger demands were approximately 6,400 passengers per hour at its peak load point between Maverick and Aquarium Stations. Assuming that the capacity of new Blue Line cars is the same as the existing Blue Line cars, when six-car trains are added to the Blue Line (pending a continuation of existing ridership trends) the MBTA initially plans to reduce the number of train sets during rush hours from 20 to 15 train sets per hour. The proposed

peak hour capacity of this service level is 8,550 passengers per hour -- 12.5% more than the existing hourly capacity.

The Central Transportation Planning Staff projects that by the year 2010, passenger demands on the Blue Line will increase by about 25%. This translates into morning peak hour peak direction demands of nearly 8,000 passengers inbound toward Boston (i.e., approximately 25% more than the existing peak inbound load of 6,400 passengers per hour)

At maximum peak hour capacity, the number of rush hour six-car trains sets could, once again, be increased to 20 trains per hour. At this service level, the Blue Line would have a capacity of 11,400 passengers per hour -- well in excess projected hourly passenger demands by the year 2010.

The MBTA Operations Directorate will not be programming six-car Blue Line operations for another 6-7 years -- i.e., not until the year 2000. Actual Blue Line operations will reflect passenger demands as they exist at that time. On the basis of existing Blue Line passenger trends, the MBTA expects to reduce the frequency of six-car trains compared to existing four-car trains (e.g., peak period spacing between trains of 4 minutes rather than 3 minutes).

By the year 2010, it is projected that the Blue Line will have a commuter parking deficiency of approximately 1,200 parking spaces. The MBTA will pursue the construction of a parking deck at Wonderland Station, as well as improved marketing of the Lynn Garage and improved feeder bus services to address this potential parking deficiency separate from this project.

While there is no "perceptible" difference in the noise characteristics of four-car vs. six-car train operations, existing and future Blue Line noise is acknowledged as a substantial public problem. The MBTA is taking strong actions to address noise impacts in East Boston and Revere including an \$8 million Blue Line

noise mitigation program as noted in the Mitigation Summary at the end of this section. Refer to Section II of this FEIR for a discussion of noise impacts. Section IV of this FEIR discusses MBTA commitments to noise mitigation.

Proposal for Bowdoin Station Closure

Closure of Bowdoin Station enables the MBTA to safely accommodate six-car trains along the entire line. The Bowdoin Station outbound platform cannot be modified to accommodate a six-car train operation and retain an acceptable platform width. Because only the center four of the six-car train sets could be used, a potential safety hazard would be created for Blue Line passengers if Bowdoin Station remains open. The MBTA will not allow outbound passengers to board on the inbound side because, for safety reasons, passengers cannot be on the trains when trains negotiate the Bowdoin Loop.

The Bowdoin Station closure is scheduled to occur at the end of the Blue Line Station Modernization Project -- no earlier than the year 1999 and not until the new Government Center headhouses are open. Its impacts are discussed in DEIR Section III.3.B.

While the MGH/Charles Red Line Station provides an alternate transit stop for those Bowdoin passengers furthest away from Bowdoin Station, an undesirable double transfer is required. The MBTA will annually consider reactivation of the Red Line-Blue Line Connector Project to address concerns related to timing the Bowdoin Station closure as close as possible to construction of the Red Line-Blue Line Connector.

On the basis of a survey conducted of passengers entering Bowdoin Station, projected average Bowdoin Station passenger walk distance to the new Government Center headhouses will be well within the standard quarter-mile maximum distance passengers will typically walk to access a transit service.

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Longest distance Bowdoin passengers who walk to and from the Massachusetts General Hospital will increase their station walking access distance by approximately 570 feet (the distance between the existing Bowdoin Station headhouse and the proposed Government Center headhouses) -- under 4 minutes of additional walking time per trip.

An alternative to the Bowdoin Station closure was explored and has four major components:

- 1) Bowdoin Station would remain open to off-load six-car trains on the inbound platform and load four of the six cars on the outbound platform;
- 2) An elevator shaft would be installed adjacent to the existing Government Center Station headhouse;
- 3) An elevator shaft and the end-of-the-line ventilation shaft would be constructed in the Cardinal Cushing Park area (as opposed to the end-of-the-line ventilation shaft proposed to be constructed in the existing headhouse building footprint), and
- 4) Two new entrances at Government Center discussed below would not be constructed to minimize operational cost impacts.

Rather than keep Bowdoin Station open in this manner with the safety deficiencies mentioned above, in addition to the Government Center headhouse that already exists, the MBTA proposes to construct two new Blue Line Government Center Station headhouses to serve both Government Center and Bowdoin Station passengers. One of these entrances will be fully accessible.

The new Government Center entrances will eliminate the need for Government Center and Bowdoin Station passengers to cross Cambridge Street, will reduce or eliminate passenger congestion at the existing Government Center entrance, and provide

more flexibility to construct necessary Blue Line station accessibility features for the Blue Line and, in the future, the Green Line. While not proposed for elimination with this project, the Bowdoin Station train turnaround loop is the single most constricting Blue Line tunnel geometry factor which affects the type of vehicles the MBTA can consider for future use on the Blue Line. Beyond this project, eventual elimination of the Bowdoin Station and loop will create an opportunity to provide greatly improved track alignment for a future Blue Line-Red Line Connector. An improved track alignment (i.e., wider track turning radii) requires the loss of the existing Bowdoin Station since relocated tracks would pass through the middle of the passenger loading area.

Positive impacts related to the closure of Bowdoin Station appear to far outweigh its adverse impacts.

Closure of Bowdoin Station is consistent with long range MBTA operations planning goals such as an eventual extension between the upgraded Government Center Station and the Charles/MGH Station and developing longer interchangeable cars between the Blue and Orange Lines.

Impacts From Station Closures During The Temporary Station Closures North Of Orient Heights

Refer to Section II.3 of this FEIR for a detailed discussion of changes to MBTA replacement transit services during the temporary station closures on the Blue Line between Wonderland and Orient Heights stations. During this period, the MBTA will improve alternative MBTA services and reduce shuttle bus impacts in response to comments received.

One of the biggest problems the MBTA faces in modernizing the Blue Line north of Orient Heights Station is the replacement of a viaduct over Winthrop Avenue in Revere at Beachmont Station. The Beachmont Station viaduct has major structural problems and

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must be replaced. However, the Beachmont Station right-of-way is very narrow -- about 60 feet in width. Closely abutting residential and business structures severely constrict the potential working area for required station area improvements.

During a one-year period between June 1994 and June 1995, the Blue Line will be shut down between the Orient Heights rail yard and Wonderland Station. Passengers at the four stations will either use improved MBTA alternative services or will be shuttled in buses to and from Orient Heights Station, which will remain open. Shuttle buses will be free for all regular Blue Line passengers except those who alight at intermediate stations in the inbound direction toward Orient Heights and those who board at intermediate stations in the outbound direction toward Wonderland Station. Shuttle buses will travel along a parallel 2.3-mile surface route. Because of the shuttle bus service, most construction activities at the Suffolk Downs, Beachmont, Revere Beach, and Wonderland stations will be compressed to reduce adverse pedestrian and traffic impacts.

For passengers boarding and alighting at Wonderland and Orient Heights Stations, shuttle bus service will generally be twice as frequent as existing Blue Line service. Including improvements to alternative services, transit capacity sufficient to accommodate projected passenger demands will be provided. Travel times for shuttle bus passengers will increase typically by 2 to 4 minutes per trip compared to the Blue Line service. Traffic operations are projected to be acceptable along the proposed shuttle bus route.

Orient Heights Station has the necessary infrastructure to accommodate end-of-the-line Blue Line service. It has served as such in the past and the MBTA is taking many steps (Refer to FEIR Section IV.1) to ensure that neither the station nor nearby neighborhoods will be adversely affected during the temporary period when shuttle bus service is provided.

To accomplish the Beachmont Station viaduct replacement and provide continuous passenger service needs, besides the No-Build Alternative, the MBTA considered two alternatives to the proposed shuttle service and rejected both for numerous reasons.

- 1) Retain 'Single -Track' Blue Line Service through Beachmont Station
 - ✓ Lengthy delays would occur for passengers along the entire Blue Line.
 - ✓ The duration of the Blue Line Station Modernization Program would increase by 3-4 years at the Suffolk Downs, Revere Beach, Beachmont, and Wonderland Stations, resulting in increased costs, and a significant increase in the duration of passenger disruptions and a significant amount of noise-generating night-time construction.
 - ✓ Potential construction-related hazards would increase for construction workers and Blue Line passengers at affected stations.
 - ✓ Station-related construction costs would increase by \$11.4 million.
- 2) Shuttle bus from Suffolk Downs Station North
 - ✓ Suffolk Downs does not have the existing facilities to accommodate 'end-of-the-line' services for the Blue Line. Such new temporary end-of-the-line facilities would have to be constructed.
 - ✓ The construction of new facilities for end-of-the-line operations at Suffolk Downs Station would require the filling of wetlands. Wetland permits are generally not attainable if there are feasible and practicable alternatives available.

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- ✓ Higher construction costs will occur. Besides a rigorous permitting process, temporary end-of-the-line facilities at Suffolk Downs Station would involve major funding of at least \$2-\$2.2 million for track, switching, and parking lot modifications.
- ✓ Extensive Blue Line Modernization Project delays would occur. Compliance of Blue Line stations with ADA, local Massachusetts Architectural Access Board, and Clean Air Act State Implementation Program requirements would also be seriously delayed.

Blue Line passengers between Wonderland and Suffolk Downs Stations were surveyed to determine their attitudes regarding the temporary Blue Line shuttle bus service program. Refer to DEIR Section III.2.A:A.2 for information concerning the passenger attitude survey. Of those surveyed, 84 % indicated they would continue to use MBTA services during the temporary program, although a few of the passengers surveyed indicated they would drive to Orient Heights Station and others indicated they would drive to their destinations. The MBTA will closely monitor the use of its facilities during the temporary Blue Line shutdown. Should it be necessary to make service adjustments and/or provide additional rider incentives to keep ridership levels at pre-shutdown levels, the MBTA will make such adjustments within the context of available funding (assuming that most rider incentives will have adverse revenue implications).

Scheduling Conflicts with the Central Artery/Tunnel (CA/T) and Massachusetts Water Resources Authority (MWRA) Projects

The MBTA is closely coordinating this project with the public and implementing agencies. Refer to Section IV for a description of the MBTA's commitment to interagency coordination activities.

At this time, construction of the Blue Line Station Modernization Project addressed in this EIR is not expected to encounter serious coordination problems with either the CA/T or MWRA projects. However, if the time period for the temporary shuttle bus program is delayed beyond June 1994, construction coordination problems could occur between this Project and the East Boston components of CA/T construction.

Impacts on Historical Structures Adjacent to State Station

Bowdoin, State, and Government Center Blue Line subway stations are located within areas which have potential historical and archaeological significance. Blue Line improvements at these stations will involve cut-and-cover soil excavation. The survey of cultural resources conducted in 1989 indicated several historically significant buildings in the impact area.

In a letter to MEPA dated October 4, 1993, the Massachusetts Historical Commission (MHC) reviewed and concurred with the findings of an *Archaeological Reconnaissance Survey, Blue Line Station Modernization Project, Bowdoin to State* (Boston Affiliates, Inc., July, 1993). Both this letter and the Survey are contained in separate Technical Appendix 9. The Survey was conducted to identify areas likely to contain historic and prehistoric sites in the areas of the Bowdoin, State, and Government Center Stations. It found that no intact cultural resources are likely to exist below grade in construction areas of this project and recommended no further archaeological investigations.

Construction Impacts

Construction impacts are addressed in detail in Sections III, IV, V, and VI of the DEIR and Sections II and IV of this FEIR. While the Blue Line is, in and of itself, a major form of traffic mitigation, construction period noise, temporary traffic disruptions, and pedestrian impacts are anticipated and discussed in Section II of this FEIR.

Except for temporary basement access easements at Maverick Station and State Station improvements which require small takings at 53 and 60 State Street (land and basement space), construction activity will occur within MBTA or publicly-owned rights-of-way.

The MBTA will take extraordinary actions to minimize potential adverse impacts during the construction phase of this program. Detailed dust and rodent control plans in compliance with local and state regulations will be prepared by station contractors prior to construction activities at each of the stations addressed in this FEIR. These measures at stations within the City of Boston will be subject to concurrence by the City of Boston. Similar measures at the Blue Line Stations within the City of Revere will be subject to concurrence by the City of Revere.

Transportation impacts such as lane and roadway closures are expected during construction of the improvements at the Government Center, State, Maverick, and Beachmont Stations. Related transit service impacts are expected to be minimal, since normal passenger waiting areas will be minimally affected.

Transit service impacts will be realized by passengers at the Orient Heights, Suffolk Downs, Beachmont, Revere Beach, and Wonderland Stations during the temporary shutdown of the Blue Line between Orient Heights and Wonderland. The MBTA will improve alternative feeder bus and MBTA commuter rail transit services during this period, and will offer passenger incentives to use alternative services (See Mitigation Summary, below). Except for the temporary shutdown period, the MBTA intends to provide regular Blue Line service during construction of the program addressed in this EIR. Except for this temporary shutdown, any elements of Blue Line station construction activities that would interrupt regular Blue Line service will be suspended during peak hours.

Passenger service impacts will be minimized because of the temporary shuttle bus service discussed previously.

Normal construction activities in sensitive residential areas near Beachmont, Orient Heights, and Maverick stations will be suspended between the hours of 7 PM and 7 AM.

Relatively small amounts of construction debris will be created due to the Blue Line Station Modernization Program.

Mitigation Summary

Following is a summary of mitigation actions the MBTA will be taking to minimize adverse impacts during the Blue Line Station Modernization Project:

During Construction

- ✓ The MBTA will provide the public with readily accessible management resources to address agency and public concerns as they occur during the program.
- ✓ At the beginning of the shuttle bus program, the MBTA will assign personnel to all affected stations to answer public inquiries on the spot. Throughout the program, Wonderland and Orient Heights Stations will have an inspector and/or starter available to answer questions. A direct 'hot line' extension will be dedicated for Blue Line shuttle service and alternative services issues/information. Access to the 'hot line' will be via the normal MBTA information number: (617) 722-3200.
- ✓ Blue Line train noise abatement measures will be taken including:
 - A nationally-renowned noise consultant will be performing a two-year systemwide evaluation of noise

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- and vibration impacts related to MBTA services and facilities. The first year of the study will focus on Blue Line noise mitigation.
- The MBTA has committed approximately \$8 million in capital funds (or 2% of the capital improvement program costs) toward the implementation of noise mitigation specifically for the Blue Line under this project.
 - The MBTA will develop and adopt a systemwide noise abatement policy. The policy will be developed in conjunction with the systemwide noise study consultant.
 - The MBTA commits to strong construction-related noise mitigation measures. To minimize adverse construction noise impacts on residents adjacent to the Orient Heights and Beachmont Stations, construction activities will generally be limited to daytime hours between 7 AM and 7 PM.
- ✓ The MBTA commits to provide shuttle bus service between Wonderland and Orient Heights Stations and improved local bus services for a one-year period between June 1994 and June, 1995 when Wonderland, Revere Beach, Beachmont, and Suffolk Downs Stations are closed temporarily to expedite station improvements. During this period, MBTA service commitments include:
- The MBTA will monitor shuttle bus service periodically to determine ridership/ revenue impacts during the program.
 - 34 peak hour shuttle bus trips will be provided each way along the corridor rather than 40 bus trips per hour described in the DEIR, approximately half of which will provide express service between Wonderland and Orient Heights Stations.
 - Bus layovers will occur only at locations which will not interfere with shuttle bus operations, on-street traffic operations, or adjacent land uses. Police details will be present during peak periods to ensure that buses have immediate access to the Orient Heights Bennington Street busway and do not clog Bennington Street. A station starter or inspector will also be assigned to the busway during operating hours.
 - The MBTA will temporarily modify the layout of Orient Heights Station to accommodate the additional service demands including 12 new turnstiles. An accessible vehicle will be assigned to the Barnes Avenue loop area to provide service between the outbound and inbound platforms for passengers unable to use the stairs connecting the platforms. The shuttle bus stop will be located adjacent to the new fare collection area.
 - Automatic token vending machines will be installed at the Wonderland and Orient Heights Station fare collection areas.
 - The MBTA mobile pass sales van will be sent to Orient Heights and Wonderland Stations at regularly scheduled times during each monthly two-week pass sales period.
 - The MBTA will provide and market expanded bus service on its 440 bus route series which provide service between Marblehead, Swampscott, Lynn and Downtown Boston.
 - During the shuttle bus program, the MBTA will take the following actions to increase the use of the Lynn Station/garage and encourage 440 bus route series riders to use Wood Island
-

Station rather than Wonderland Station:

- ☐ Keep the Lynn garage free to MBTA passengers as it is presently.
- ☐ Market alternative Lynn Station/garage and Wood Island Station services.
- Police details will be assigned to locations along the shuttle bus route to assist with traffic and bus operations and ensure safe passenger street crossings.
- ✓ The MBTA commits to work with the Boston Transportation Department (BTD) and other City of Boston agencies to resolve concerns raised about traffic and pedestrian circulation impacts associated with the closure of Bowdoin Station and the proposed new headhouse locations at Government Center and State Stations. The MBTA will obtain BTD concurrence on construction traffic sequencing plans related to City of Boston Blue Line Stations prior to construction.
- ✓ The MBTA will require contractors to recycle construction debris which has a market for recycling.
- ✓ The MBTA will require contractors to prepare detailed dust and rodent control plans in compliance with local and state regulations prior to the issuance of bid packages for work at each of the stations addressed in this EIR.
- ✓ Several unresolved issues pertaining to headhouse designs for the State, Government Center, and Maverick stations need to be addressed. These include final headhouse footprints, heights, materials, and other design elements. The MBTA and its station architects agree to work closely with affected City of Boston agencies and the Massachusetts Historical Commission through the Section 106 process to resolve these issues and identify the appropriate materials and new headhouse designs consistent with the built environment in the area of each City of Boston Blue Line station addressed in this EIR.
- ✓ The MBTA will coordinate utility relocation impacts with all affected utilities and provide preliminary and final design plans for review and concurrence prior to construction. Continuous uninterrupted service will be maintained on all affected utilities.

Post-Construction

- ✓ The MBTA commits to conduct an annual review of the priority for the funding design and construction of the Blue Line/Red Line Connector in relation to other service priorities.
- ✓ The MBTA has met with City agencies concerned about existing and future headhouse maintenance issues and commits to continue the process of working closely with City agencies to resolve these issues.
- ✓ The MBTA commits to resolve long term Blue Line parking shortages in a timely manner. To address the $\pm 1,200$ commuter parking space shortage by the year 2010, the MBTA will pursue a possible parking deck/garage at Wonderland Station separately through its ongoing Park-Ride Improvement Program.
- ✓ The MBTA will also attempt to reduce Blue Line park-ride demands in the long term by marketing alternative feeder bus services to the Blue Line and will take actions to increase use of the 1,000 space Lynn Station/garage. Full use of the Lynn Station/garage could address the major proportion of the potential future parking

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shortage along the Blue Line project corridor.

Miscellaneous MEPA Comments

Project Costs

The estimate of station-related project costs has been refined since the Notice of Project Change and ENF. The referenced cost of \$181 million relates directly to the station modernization component of the overall Blue Line Station Modernization Project at the time of the Notice of Project Change and ENF. This cost is presently estimated at \$213 million, up approximately 18 percent from the estimate contained in the Notice of Project Change and ENF. The cost of \$434.2 million refers to the entire Blue Line Modernization Project cost. Approximately \$221.2 million of this cost is attributed to non-station elements of the Project, including power improvements, ventilation shafts, Orient Heights carhouse renovations (a separate project), vehicle procurement, MBTA force account, etc.

Project Funding Issues

The MBTA Board of Directors approves budgets on a regular basis and all MBTA projects are subject to systemwide budget constraints. The MBTA cannot be more specific about how funding constraints will affect this Project because of unforeseen changes in the regional and local economy. This Project is, however, very high on the MBTA's list of priorities.

Level of Service Computation at Bennington, Winthrop, Unity, and State Streets Intersection with Shuttle Buses

The level of service analysis (i.e., a qualitative measure of traffic flow) of future traffic operations with the shuttle bus service at the above intersection assumed the existing traffic signal controller would be optimized to reduce traffic congestion during the shuttle bus operation. The optimization analysis resulted

in a reduction in delay for the movement cited. The optimization timing plan, contained in the Technical Appendix 5 - Traffic to the DEIR, assumed the existing signal phases with a different timing pattern (i.e., increased cycle length during peak hours from 101 seconds to 120 seconds). The required timing adjustment to the existing controller at this intersection is assumed to be made by the agency with jurisdiction over this signal prior to the shuttle bus operation. Such an adjustment may not require new equipment.

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Chapter I

PROJECT DESCRIPTION and AFFECTED ENVIRONMENT

I. PROJECT DESCRIPTION AND AFFECTED ENVIRONMENT

This section describes the Blue Line Station Modernization Project and discusses revisions to the existing affected environment for components of the Project addressed in the DEIR. Sections of the DEIR which were not commented upon have not been revised and are incorporated by reference.

I.1 OVERVIEW OF PROPOSED ACTION

This Final Environmental Impact Report (FEIR) has been prepared to address construction and post-construction impacts at eight of the twelve Blue Line stations included in the Station Modernization Program. The Revere Beach, Wood Island, Aquarium, and Airport Stations have all been permitted separately. The stations evaluated include:

- ✓ Bowdoin Station;
- ✓ Government Center Station;
- ✓ State Station;
- ✓ Maverick Station;
- ✓ Orient Heights Station;
- ✓ Suffolk Downs Station;
- ✓ Beachmont Station; and
- ✓ Wonderland Station.

The purposes of the proposed Blue Line Station Modernization Program addressed in this report are five-fold:

- 1) To ensure that affected Blue Line stations fully comply with Massachusetts Architectural Access Board standards and the 1990 Americans with Disabilities Act (ADA) requirements.
- 2) To provide structural improvements to correct existing deteriorating conditions.
- 3) To serve existing passengers better by providing them with stations which are structurally sound, aesthetic, clean, well lighted, and secure.

- 4) To develop station facility improvements fully consistent with long range MBTA rapid transit system service goals.
- 5) To reduce peak hour crowding and provide some flexibility for accommodating projected future Blue Line passenger demands. This will be accomplished by making necessary modifications to Blue Line stations to accommodate six-car trains. At five of the twelve existing Blue Line stations, inbound and outbound platforms will be extended to accommodate longer six-car trains. The other stations either have existing platforms or unused platform areas sufficient in length -- i.e., 283-foot minimum length -- to accommodate six-car trains (each existing Blue Line train car is just under 49 feet in length).

The Blue Line Station Modernization Program addressed in this FEIR represents the station components of the overall Blue Line Modernization Project. As part of the overall project, the MBTA will be purchasing 35 new Blue Line train cars to provide the necessary six-car train sets to service the renovated Blue Line stations and will be reconditioning the current Blue Line vehicle fleet which has been in service for 12-13 years. New Blue Line vehicles are expected to be delivered by the end of the Blue Line Modernization Program. Blue Line vehicle fleet upgrades are being completed on a continuous basis under the MBTA's rail vehicle maintenance program.

A Blue Line systemwide power upgrade is programmed to be completed by 1997. Phase I of the power upgrade involves the third rail system from Bowdoin to Airport; Phase II involves the catenary system between Airport and Wonderland Station. A 2.5-mile Blue Line track upgrade between Bowdoin and Airport Stations is being completed during the next few years by MBTA personnel during late night and off-peak hours to minimize passenger impacts. A signal upgrade of the Blue Line is also underway.

1.2 NO-BUILD ALTERNATIVE

The No-Build Alternative involves retaining the twelve existing Blue Line stations in their existing configurations. Separate activities associated with upgrading existing vehicles, and maintenance related to the signal, power, and track improvements will be implemented with the No-Build Alternative. No additional improvements beyond those already implemented or in progress will occur. Neither ADA nor Massachusetts Architectural Access Board requirements will be met, nor will necessary structural improvements be made.

1.3 THE PROPOSED ACTION

Following is a summary of the proposed action at each of the stations addressed in this report. For readability, cited graphics are provided at the end of this subsection. In addition to the proposed action, alternative courses of action were examined for the Bowdoin and Government Center Stations and are discussed below. While not discussed below, construction at each station will include ADA-compliance features such as tactile platform edges, special signs for visually impaired persons, phone lines, etc.

1.3.A Bowdoin Station

The existing Bowdoin Station headhouse (*i.e., entrance/exit*) is proposed to be closed to passenger service (refer to Figure I.1). An end-of-the line ventilation shaft is proposed to be constructed within the footprint of the existing Bowdoin Station headhouse.

While there are many reasons for the proposed closure of Bowdoin Station, two stand out.

First, to comply with the Clean Air Act Statewide Implementation Program (SIP), the Blue Line must be able to accommodate six-car trains. The layout of Bowdoin Station is such that six-car trains cannot fit adequately on the outbound platform while maintaining sufficient platform width to

allow passengers to safely wait for incoming trains. Only four of each six-car train set can be used to load passengers safely in the outbound direction. This is a highly undesirable operating condition which could adversely affect passenger safety.

Second, based on observations, pedestrian counts, and a passenger survey conducted especially for this project, a large number of Bowdoin and Government Center passengers cross busy Cambridge Street at mid-block to access the Government Center and Bowdoin Stations. The need for mid-block Cambridge Street pedestrian crossings to access the Blue or Green Lines is eliminated by the construction of the two new Government Center headhouses and closure of Bowdoin Station.

An alternative to the proposed closure of Bowdoin Station was examined, but is not proposed for implementation. The alternative has four major components:

- 1) Bowdoin Station would remain open to off-load six-car trains on the inbound platform and load four of the six cars on the outbound platform;
- 2) An elevator shaft would be installed adjacent to the existing Government Center Station headhouse;
- 3) An elevator shaft and end-of-the-line ventilation shaft would be constructed in the Cardinal Cushing Park area (as opposed to the end-of-the-line ventilation shaft proposed to be constructed in the existing headhouse building footprint), and
- 4) The two new entrances discussed under Section I.3.B would not be constructed (to minimize operational cost impacts).

Rather than keep the Bowdoin Station open in this manner with the safety deficiencies discussed above, the MBTA proposes to construct two new Blue Line Government Center Station headhouses to serve both Government Center and Bowdoin Station

passengers. The entrance on the City Hall Plaza side of the street will be fully accessible (see Government Center Station discussion which follows).

I.3.B Government Center Station

The Government Center Blue Line Station will be upgraded 1) to accommodate both Bowdoin and Government Center Blue Line riders, 2) to reduce crowding at the existing Government Center entrance, and 3) to improve the potential for making future Green Line platforms at Government Center fully accessible. Designs of the proposed new station headhouses will be closely coordinated with affected City of Boston agencies and the Massachusetts Historical Commission and Boston Landmarks Commission. Key components of the proposed Blue Line improvements at Government Center Station (refer ahead to Figure I.1) include the following:

- ✓ Construct two new direct Blue Line passenger access headhouses on both sides of Cambridge Street in the vicinity of Two Center Plaza. If Bowdoin Station remains open, neither of these entrances can be constructed without increasing MBTA operating costs by approximately \$250,000 annually. The new headhouse on the City Hall Plaza side of Cambridge Street will have elevator, escalator, and stair access to the Blue Line platforms.

Due to limited sidewalk space, building foundation impacts, and potential utility impacts on the Two Center Plaza side of Cambridge Street, only stairwell and escalator access is proposed at this headhouse.

The new headhouses will provide access to a new mezzanine-level fare collection area that will include four new turnstiles and a new fare collection booth. From the fare collection area, the Blue Line platform will be accessed by elevator, escalator, and stairs. Passengers entering at the new Government Center

headhouses may also access the Green Line portion of the Government Center Station via two existing stairwells and an existing escalator.

The mezzanine area below Cambridge Street already exists; its reopening means that the MBTA is reactivating part of the old Scollay Square Station which has been closed since the 1950's.

- ✓ Increase the length of the inbound and outbound platforms to accommodate six-car trains by removing a metal architectural end wall on the north side of the existing Blue Line platform (i.e., towards Bowdoin Station). Platforms hidden from view due to the metal architectural end wall will be refurbished.
- ✓ Construct a skylight in the Cambridge Street median to provide daytime illumination of the new mezzanine-level fare collection area.
- ✓ Provide new exterior and interior station finishes including landscaping, lighting, artwork, passenger information systems, and other passenger amenities.

I.3.C State Station

State Station is presently accessed via the Old State House, a National Historic Landmark and an entrance on the Washington Mall adjacent to 28 State Street. Direct access is provided to the Orange Line as well as rather circuitous access to the Blue Line. Improvements at State Station involve the following five major components (Refer to Figure I.2):

- ✓ Extend the inbound and outbound platforms easterly towards Aquarium Station. This will require traffic staging on State Street, Congress Street, and Kilby Street.
- ✓ Construct two new passenger headhouses in front of 53 and 60 State Streets including new fare collection

areas. In front of the 60 State Street building, a new elevator, stairwell, and escalator will provide direct access to the newly extended Blue Line inbound platform. In front of the 53 State Street building, a new elevator and stairwell will provide direct access to the extended Blue Line outbound platform. Passengers entering at either of the new headhouses will have full accessibility to all other State Street Station Blue and Orange Line platforms below grade.

- ✓ Provide a direct ramp connection between the inbound Blue Line platform area and the existing Orange Line platform area at State Station to provide full accessibility between the platforms.
- ✓ Provide new Blue Line interior and exterior station finishes including landscaping, lighting, artwork, passenger information systems, and other passenger amenities.

The MBTA is committed to respecting the historic character of the State Station area with these improvements, and is committed to coordinating the design of the new State headhouses with the Massachusetts Historical Commission and the Boston Landmarks Commission.

I.3.D Maverick Station

Refer ahead to Figure I.3 for an illustration of proposed improvements at Maverick Station. This station, the first terminus of the old East Boston line, will be reconstructed and an auxiliary headhouse entrance developed. Following is a summary of the key features of the Maverick Station improvements.

- ✓ Reconstruct existing closed platform areas on northerly ends of the existing platforms to accommodate six-car trains.
- ✓ Expose the tunnel in the area of Lewis Park and install a new waterproofing

membrane to replace the existing leaking membrane.

- ✓ Modernize the existing headhouse and provide new entrance/exits adjacent to Sumner Street. One of the entrance/exits will include an elevator to improve pedestrian access and meet Massachusetts Access Board and ADA accessibility requirements.
- ✓ Construct new interior and exterior station finishes including headhouse, trackmen's and station support facilities including lighting, artwork, passenger information systems, and other passenger amenities. New landscaping will replace dead and root-bound trees above the station and in Lewis Park.
- ✓ Install a new emergency power generator and provide new emergency egress facilities from the platform level.
- ✓ Implement traffic circulation and parking improvements within the Maverick Square area in coordination with the City of Boston and local businesses and residents.

I.3.E Orient Heights Station

Work at the Orient Heights Station will not proceed until the Frank Scarpa Bridge reconstruction and intersection work at Saratoga and Bennington Streets by the City of Boston and the Massachusetts Highway Department (refer to Section III for a description of this work) has been substantially completed. Orient Heights Station will serve as a temporary terminus for the Blue Line during a one-year period between 1994 and 1995 (refer to Section II for a description of the shuttle bus replacement service during this period).

While it is not necessary to increase the length of the Orient Heights platforms to accommodate six-car trains, shortly after completion of the temporary one-year shuttle bus program, the MBTA will construct the following station modernization components

at Orient Heights Station (refer to Figure I.4):

- ✓ Install elevators on the inbound and outbound platforms to eliminate the need to use stairwells in crossing between inbound and outbound platforms. A new escalator will be installed on the outbound platform.
- ✓ Construct a new trainmen's support facility on an existing foundation.
- ✓ Install an emergency power generator and emergency accessible egresses from the inbound and outbound platforms.
- ✓ Revise the roof canopies to provide improved weather protection.
- ✓ Relocate MBTA employee parking to an area accessed by Austin Avenue via Benning Street.
- ✓ Provide new interior and exterior station finishes including headhouse modernization, lighting, artwork, passenger information systems, and other passenger amenities. Exterior landscaping of the surrounding MBTA property will be included to provide shade and wind buffers as well as to reduce the amount of paved areas.
- ✓ Modify existing ramps and hand-rail system to comply with current requirements of the Massachusetts Access Board and the 1990 Americans with Disabilities Act (ADA) requirements.
- ✓ Extend the inbound platform southerly and outbound platform northerly by \pm 100 feet to accommodate six-car trains.
- ✓ Provide new landscaping to create a 'wind shelter' for passengers waiting for trains.
- ✓ Construct new employee facilities.
- ✓ Install a new emergency generator and provide accessible emergency egress from the inbound and outbound platforms.
- ✓ Provide passenger information systems, and other station amenities.

As a separate project, the MBTA will be addressing necessary improvements to the Orient Heights car house and yard.

I.3.F Suffolk Downs Station

Suffolk Downs Station is the most modern of the existing Blue Line stations, having been reconstructed in the early 1980's after being closed for several years due to a fire.

The MBTA will complete the following improvements within the context of the Blue Line Station Modernization Program (refer to Figure I.5):

I.3.G Beachmont Station

Much of the existing Beachmont Station is on viaduct. Beachmont Station platforms on the viaduct are to be removed and replaced to the south of the existing platforms without increasing existing platform lengths. In addition to the overall Blue Line Modernization Program objectives, the reduction of transit-related noise levels is an important goal of proposed Beachmont Station improvements.

The existing steel/concrete viaduct will be replaced with a new concrete noise and vibration reducing structure and a new deck will be installed. The new station enclosure will also be extended southerly to create a larger passenger waiting area.

Modernization of the Beachmont Station will include the following components (refer to Figure I.6).

- ✓ Relocate the station platforms southerly by \pm 100 feet to accommodate six-car trains.

- ✓ Construct two new elevators, one each to the inbound and outbound platforms, and correct platform cross-slopes in compliance with the Massachusetts Access Board and ADA requirements.
- ✓ Construct new station support facilities including an emergency generator.
- ✓ Provide ballast mats throughout the structure to reduce noise and vibration.
- ✓ Reconstruct platform walls to provide better natural lighting and better weather protection to waiting passengers.
- ✓ Provide new interior and exterior station finishes including lighting, artwork, passenger information systems, and other passenger amenities.

1.3.H Wonderland Station

A major upgrade of Wonderland Station, the Blue Line terminus station, has been underway for the past few years. New platform wheelchair access ramps have been installed at the station. Existing park-ride and drop-off/pick-up areas have been refurbished and enlarged. The traffic signal at the intersection of Route 1A (North Shore Road) and the Wonderland Station entrance has also been upgraded. With this project, the following additional elements are to be completed (refer to Figure I.7).

- ✓ Install new rest rooms and provide accessibility in compliance with ADA and Massachusetts Access Board requirements.
- ✓ Extend inbound and outbound platforms in both directions for a total of ± 70 feet to provide the necessary length to accommodate six car trains without encroaching on the New England Power Company splicing chambers.
- ✓ Repair the cross platform footbridge and roof canopies and drainage system.

- ✓ Provide new interior and exterior station finishes including lighting, artwork, passenger information systems, and other passenger amenities.

1.3.I Schedule

The overall proposed Blue Line Station Modernization Program construction schedule is expected to occur between Fall, 1993 and the end of the year 2000. Proposed construction periods are subject to change depending on the availability of funding. Figure I.8 illustrates the preliminary construction schedule related to Blue Line stations.

1.1 Construction Schedule Coordination

The MBTA's Blue Line Station Modernization Program described in this DEIR is being coordinated with the Massachusetts Highway Department and the Central Artery/Third Harbor Tunnel Project team, including the City of Boston CA/THT Team. Furthermore, the MBTA is coordinating its construction activities with the Massachusetts Water Resources Authority, the Metropolitan District Commission, as well as the Cities of Boston and Revere.

Ongoing coordination efforts will be maintained throughout the duration of Program construction activities to ensure that such activities do not produce intolerable conditions within the context of multiple construction activities in affected areas.

To maintain good schedule coordination, it is essential that the Blue Line Station Modernization Program temporary station closures occur as scheduled no later than June 1994.

Central Artery/Third Harbor Tunnel Project

The Central Artery/Third Harbor Tunnel (CA/THT) Project is a \$6 billion construction project being completed between 1992 and 2002. The project will depress and widen the

Central Artery (I-93) through downtown Boston and construct a new four-lane Third Harbor Tunnel (I-90) beneath Boston Harbor connecting Logan Airport and the Fort Point Channel area of South Boston via a Seaport Access Road.

Construction of the Blue Line Aquarium, Wood Island, and Airport Stations, not addressed in this FEIR, is being closely coordinated with the CA/THT Project. These MBTA stations will be most directly affected by the CA/THT Project.

The MBTA has established an MBTA CA/THT coordination unit. This unit has three coordination activity functions: 1) MBTA facilities and services which may be affected by CA/THT construction activities will be protected on a day-to-day basis; 2) It will ensure that a regional transit mitigation plan to minimize traffic impacts of CA/THT construction is coordinated with the CA/THT Project; and 3) That the MBTA will work cooperatively with the CA/THT team to seek construction opportunities to enhance improvements to transit facilities.

Blue Line Station construction activities described in this report at Bowdoin, State, and Government Center which will either be affected by or will affect CA/THT construction as well as construction activities at Wood Island and Airport Stations, will be coordinated with the CA/THT Project through the MBTA CA/THT coordination unit.

For Aquarium Station (impacts of which are not addressed in this DEIR), an MBTA Assistant Director for Design and Construction is responsible for coordinating MBTA construction activities with the CA/THT Project. The roof of the Aquarium Station is located at the eastern end of State Street and will also serve as the floor of the structure containing the Central Artery tunnel. Construction traffic sequencing for Aquarium Station will be similar to the construction traffic sequencing employed at State Station -- i.e., two lanes of traffic are to remain open on State Street at all times while construction

proceeds on the Aquarium Station headhouses and platforms to be lengthened. As shown on Figure I.8, the construction period for Aquarium Station overlaps with the construction period of State Station and, to a lesser degree, with Government Center Station.

Revere Beach Station Improvements

Although it has received separate environmental permits (refer to the Executive Summary), construction of Revere Beach Station improvements is to occur simultaneous with the construction of improvements at Suffolk Downs, Beachmont, and Wonderland Stations.

Most construction will occur during the period when the Blue Line is shut down between Orient Heights and Wonderland Stations. Therefore, Revere Beach Station improvements do not pose coordination difficulties for the Program discussed in this FEIR.

City of Boston

In cooperative venture with the MBTA, the City of Boston and the Massachusetts Highway Department will be implementing improvements at Saratoga Street and Bennington Street including the widening and replacement of the Frank Scarpa Bridge. These improvements should be substantially completed prior to the shuttle bus replacement program between Wonderland and Orient Heights Stations scheduled between June 1994 and June 1995.

Massachusetts Water Resources Authority (MWRA)

According to the Massachusetts Water Resources Authority Capital Improvement Program for fiscal years 1992-1994, the MWRA Northern High Service Pipeline and the Orient Heights Booster Pump Station are the only program actions that may conflict with the MBTA Blue Line Station Modernization Program. Work on both projects is expected to be completed in 1993,

prior to the commencement of construction at Beachmont or Orient Heights Stations.

The MBTA will continue to coordinate its construction activities in Downtown Boston, East Boston, and Revere with the MWRA.

Metropolitan District Commission

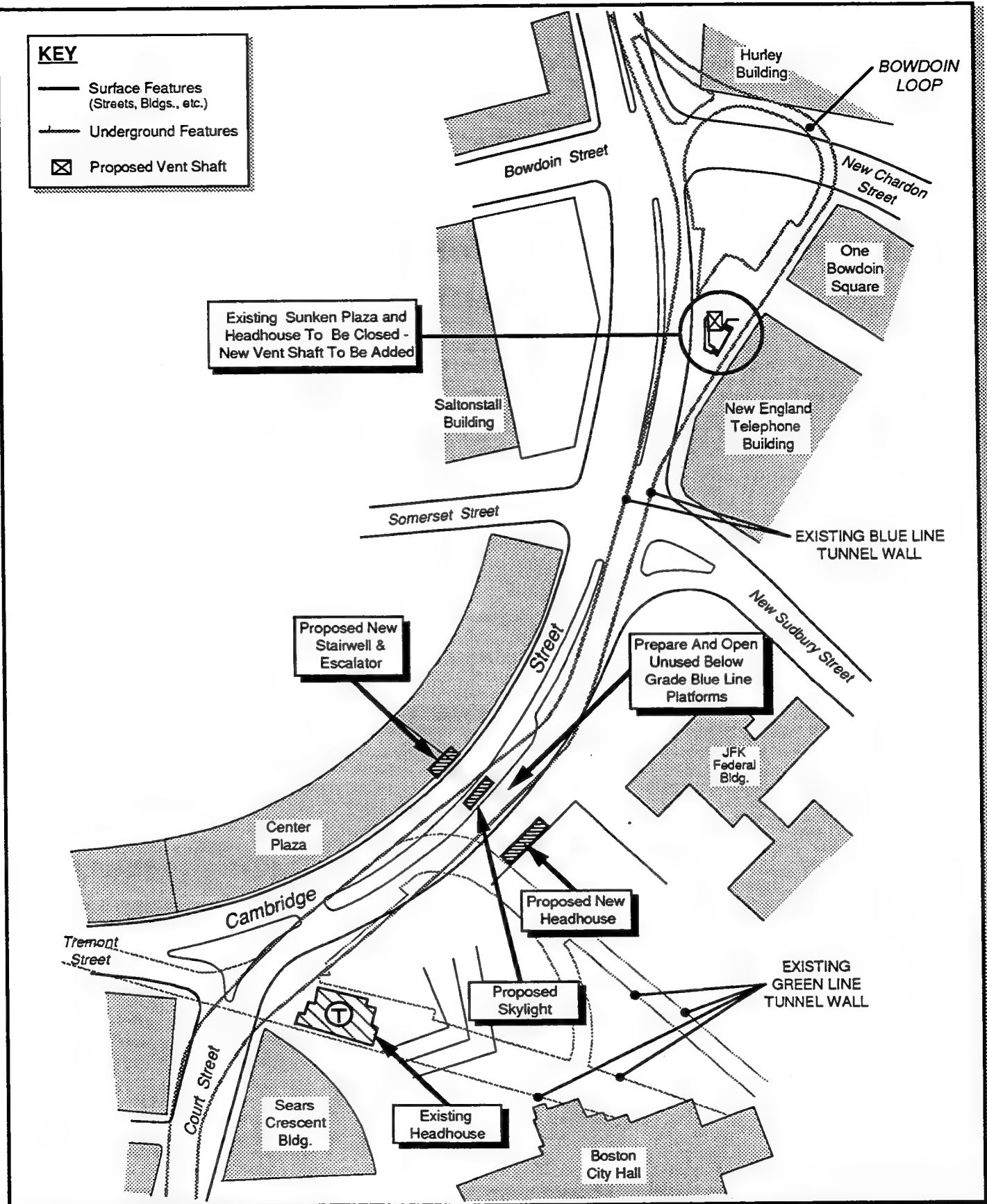
Temporary use of the Metropolitan District Commission (MDC) Parkway system during the Blue Line shuttle bus program between Wonderland and Orient Heights is being coordinated with the MDC.

1.3.J Costs

The MBTA estimates that the entire Blue Line Modernization Project, including the program elements discussed in this EIR, will cost approximately \$434.2 million, most of which involves track and signal improvements, and the purchase of new vehicles. The MBTA notes that the station-related component of this project is \$181 million, as presented in the ENF.

KEY

- Surface Features
(Streets, Bldgs., etc.)
- - - Underground Features
- ⊠ Proposed Vent Shaft



Approximate Scale:
1 in. = 110 ft.

Note:
Station Modernization includes new interior and exterior station finishes such as landscaping, lighting, artwork, and passenger information systems.

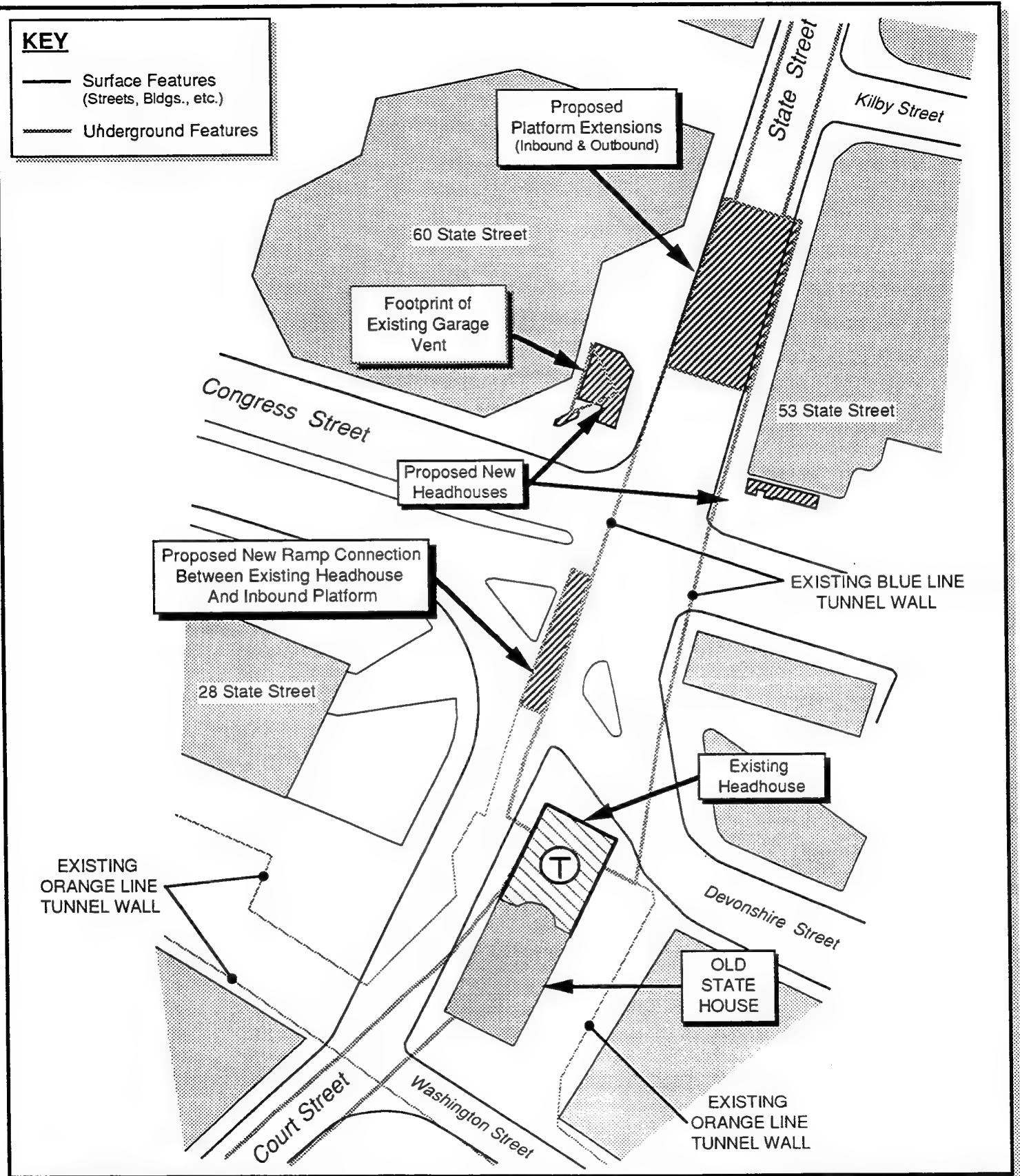
BOWDOIN AND GOVERNMENT CENTER STATION MODERNIZATION SUMMARY

Ⓜ Massachusetts Bay Transportation Authority
Blue Line Station Modernization FEIR

Figure I.1

KEY

- Surface Features
(Streets, Bldgs., etc.)
- Underground Features



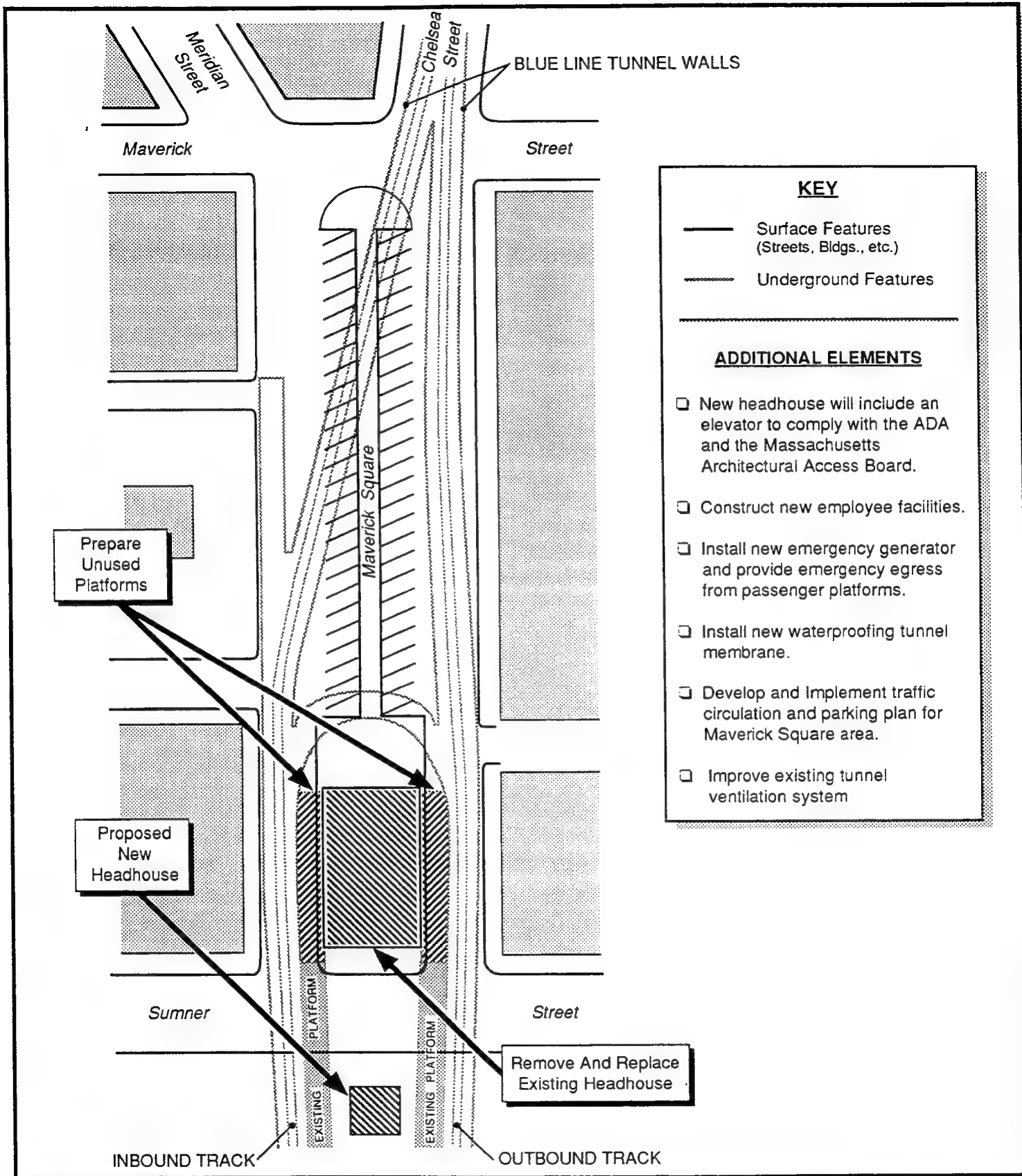
Approximate Scale:
1 in. = 70 ft.

Note:
Station modernization includes new interior and exterior station finishes such as landscaping, lighting, artwork, and passenger information systems.

STATE
STATION MODERNIZATION SUMMARY
T Massachusetts Bay Transportation Authority

Blue Line Station Modernization FEIR

Figure I.2



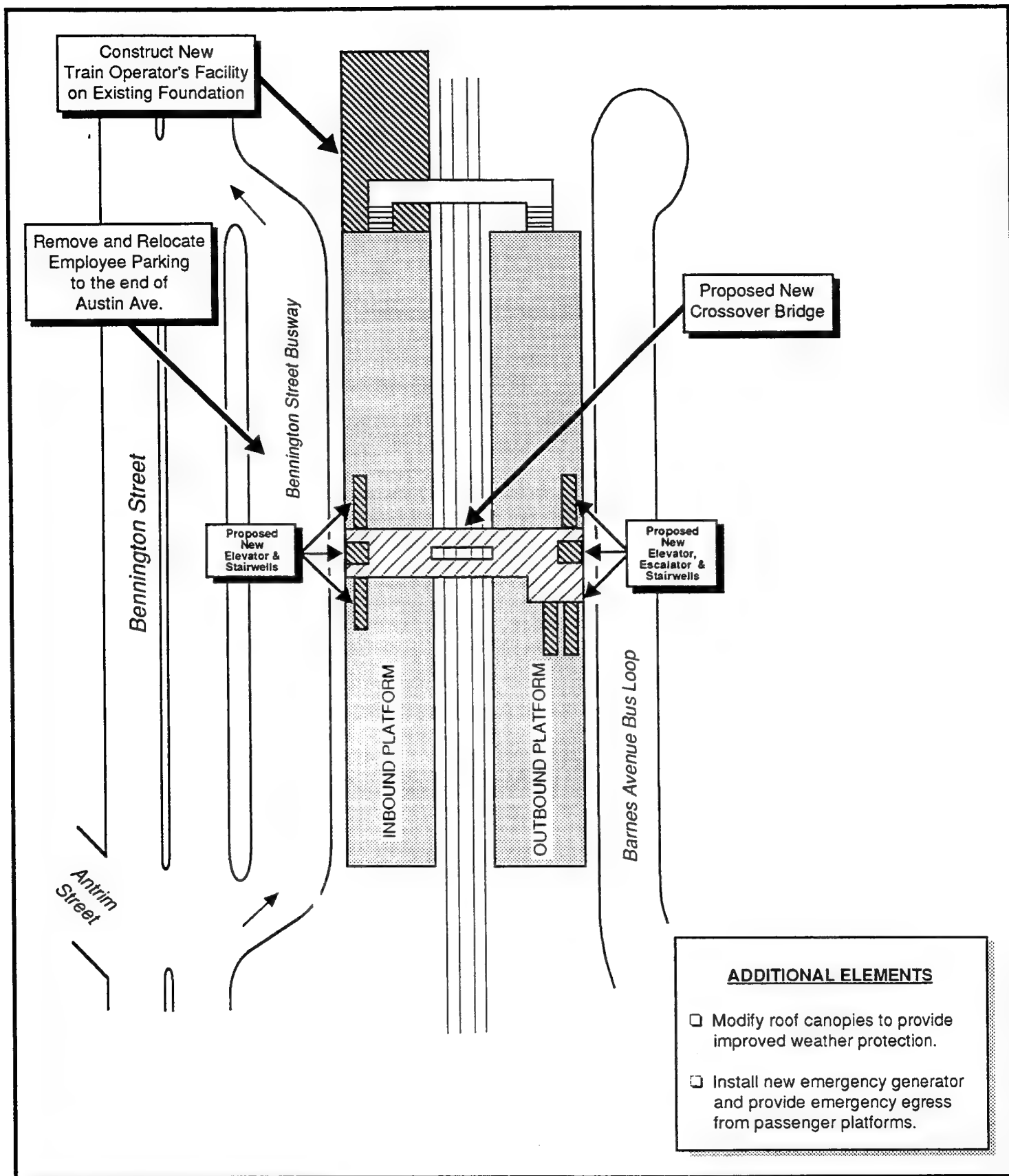
Approximate Scale:
1 in. = 80 ft.

Note:
Station Modernization includes new interior and exterior station finishes such as landscaping, lighting, artwork, and passenger information systems.

MAVERICK STATION MODERNIZATION SUMMARY

Massachusetts Bay Transportation Authority
Blue Line Station Modernization FEIR

Figure 1.3

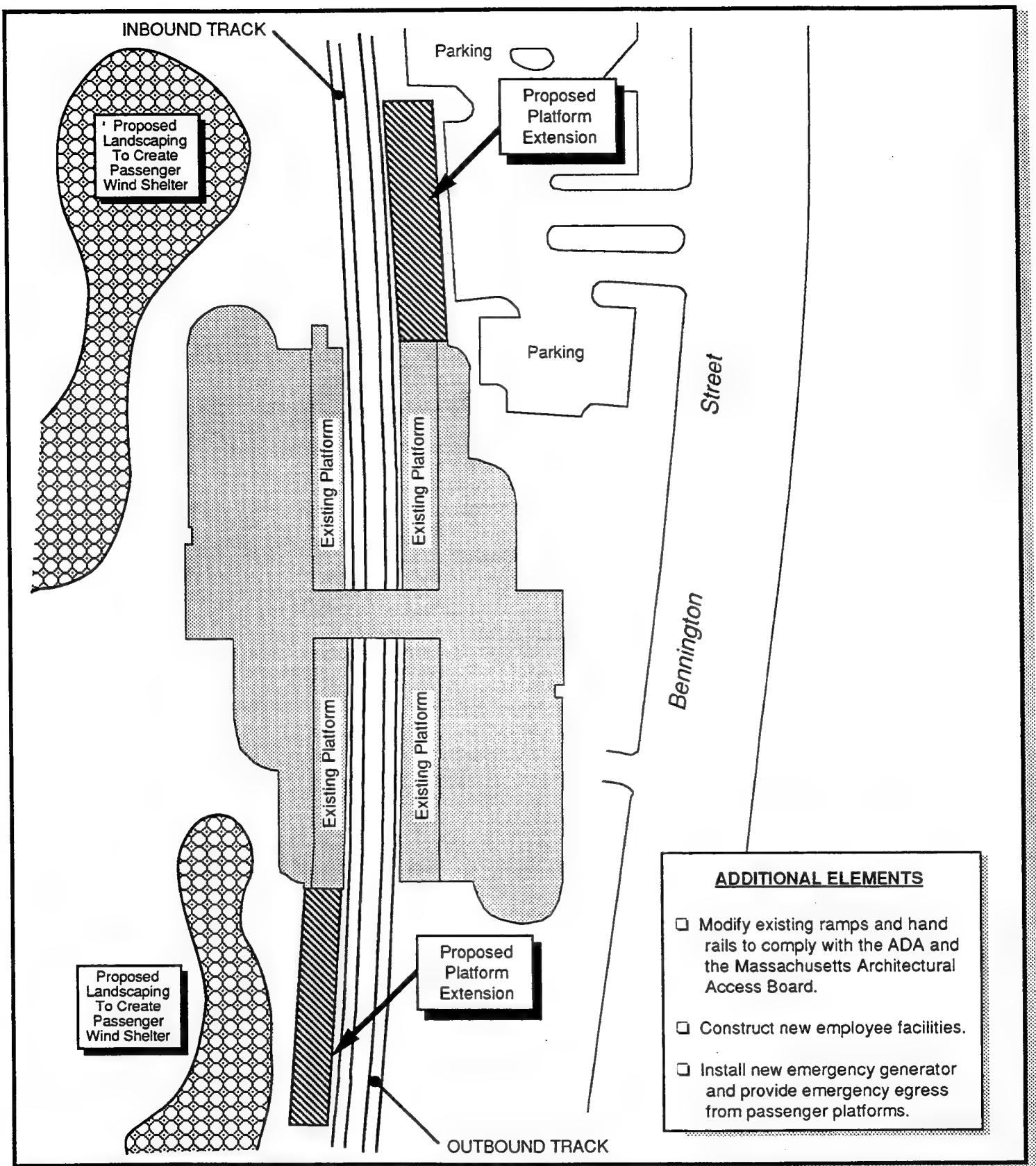


Schematic Diagram:
Not to Scale

Note:
Station Modernization includes new interior and exterior station finishes such as landscaping, lighting, artwork, and passenger information systems.

ORIENT HEIGHTS STATION MODERNIZATION SUMMARY

Ⓜ Massachusetts Bay Transportation Authority
Blue Line Station Modernization FEIR



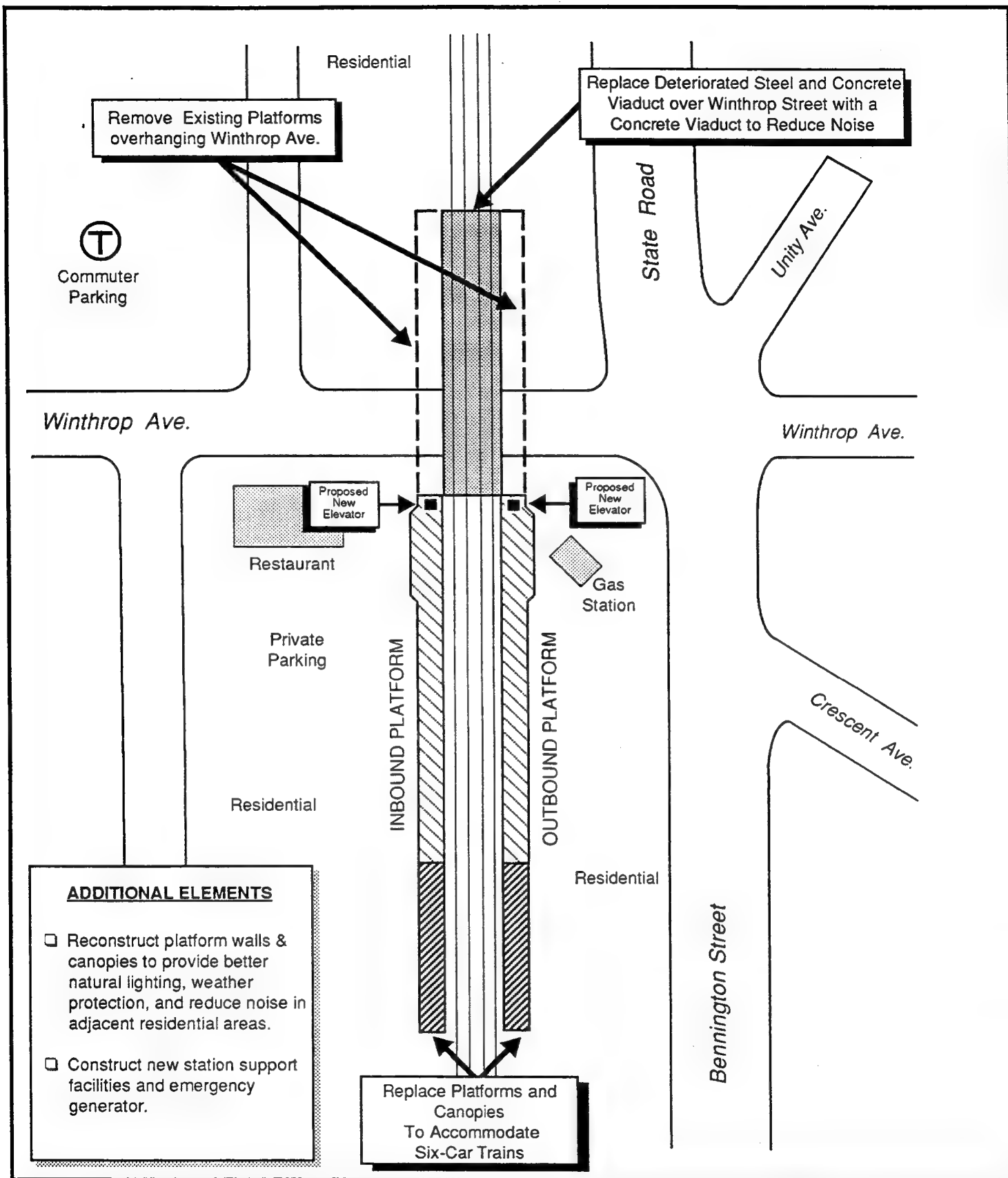
Approximate Scale:
1 in. = 55 ft.

Note:
Station Modernization includes new interior and exterior station finishes such as landscaping, lighting, artwork, and passenger information systems.

SUFFOLK DOWNS STATION MODERNIZATION SUMMARY

 **Massachusetts Bay Transportation Authority**
 Blue Line Station Modernization FEIR

Figure I.5

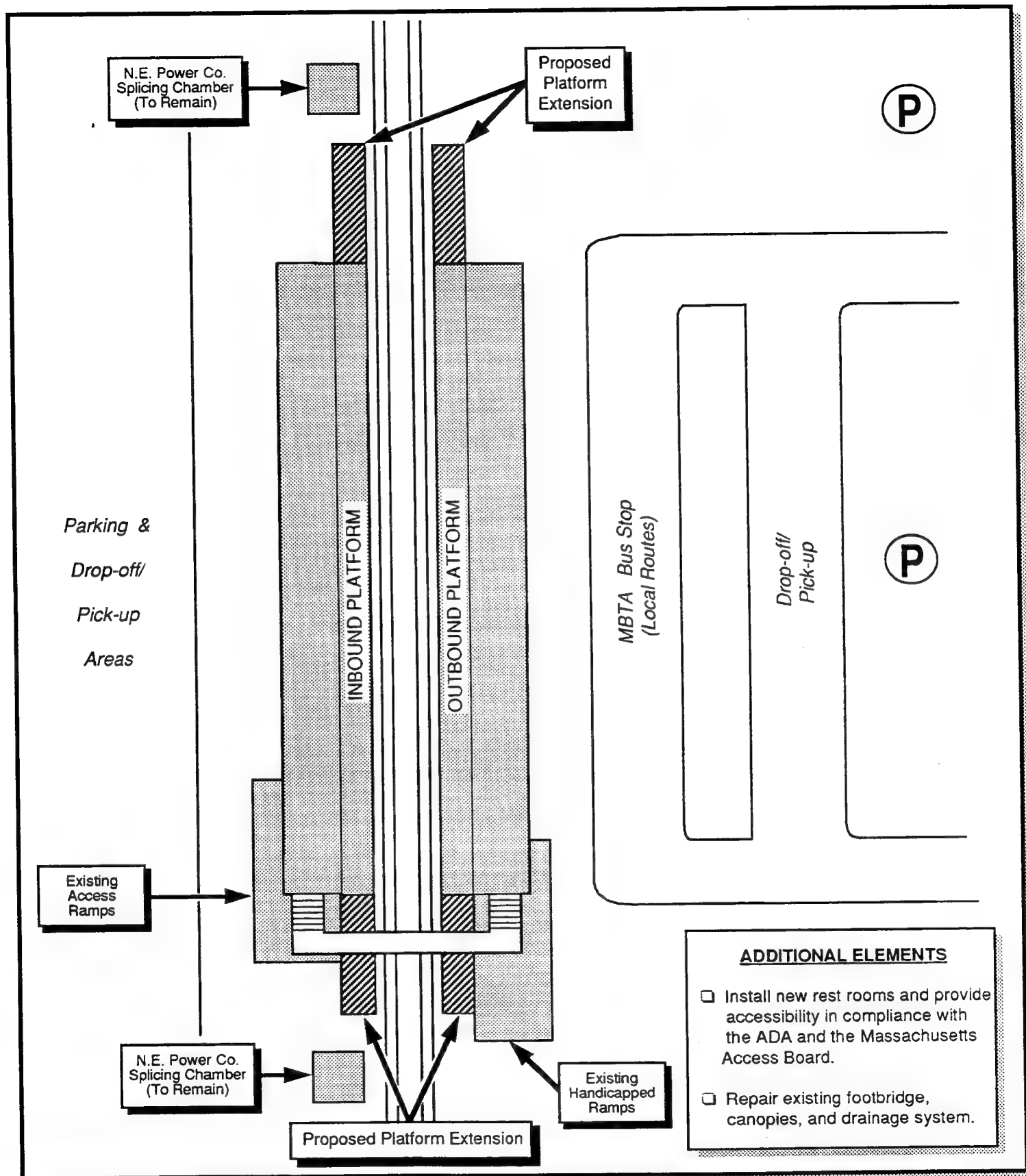


Schematic Diagram:
Not to Scale

Note:
Station Modernization includes new interior and exterior station finishes such as landscaping, lighting, artwork, and passenger information systems.

BEACHMONT STATION MODERNIZATION SUMMARY

Ⓣ Massachusetts Bay Transportation Authority
Blue Line Station Modernization FEIR



Schematic Diagram:
Not to Scale

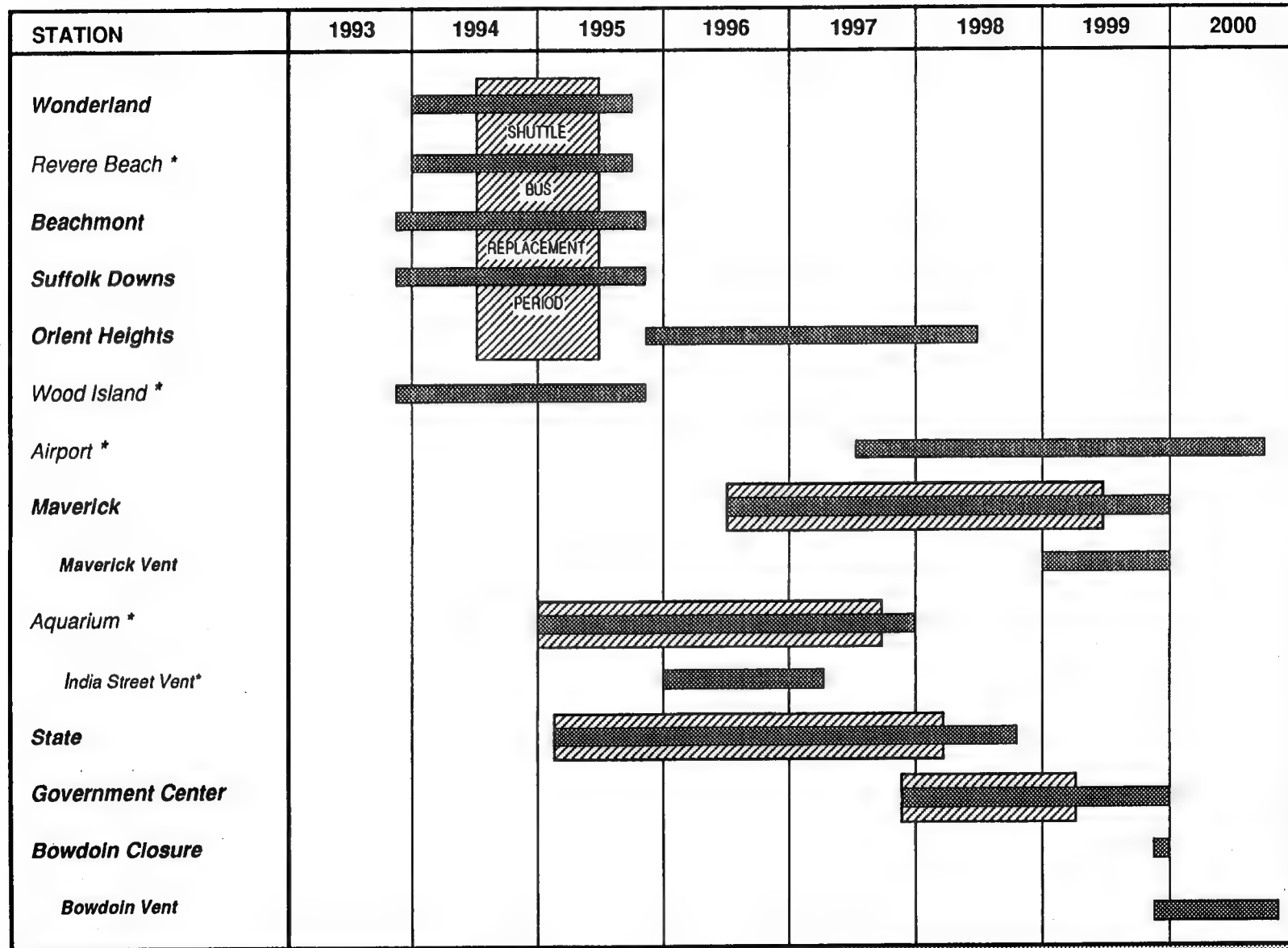
Note:
Station Modernization includes new interior and exterior station finishes such as landscaping, lighting, artwork, and passenger information systems.

WONDERLAND STATION MODERNIZATION SUMMARY

Ⓜ Massachusetts Bay Transportation Authority
Blue Line Station Modernization FEIR

Figure 1.7

BLUE LINE STATION MODERNIZATION PROJECT
PRELIMINARY CONSTRUCTION SCHEDULE
(Subject to Change Pending Funding Availability)



KEY: * Stations Not Addressed In This Study

 █ Overall Construction Period

 █ Construction Period With Traffic Impacts

Figure I.8

I.4 DOWNTOWN BLUE LINE STATION PEDESTRIAN STUDIES

I.4.A Government Center Existing Conditions

Government Center Station provides service to the MBTA Green and Blue Lines. It has one existing headhouse located in the southwest corner of Government Center Plaza adjacent to Boston City Hall. According to the MBTA's April 1992 count, the existing headhouse serves 15,460 daily passengers into the station. Of these passengers, the MBTA estimates that 18 percent (2,783) are Blue Line riders; 82 percent (12,677) are Green Line riders.

A.1 Pedestrian Studies

Two Government Center area pedestrian studies were performed -- the first during September 1992 and the second during July 1993 in response to comments on the DEIR. Typical pedestrian travel patterns at the existing and future Government Center headhouses were evaluated. Both studies collected pedestrian volumes during the AM, mid-day, and PM peak periods.

During the first study, conducted on Thursday, September 17, 1992, manual counts were performed only on Cambridge Street sidewalks at the proposed two new Government Center headhouses. A typical weekday was selected for the count. The weather was sunny and mild with temperatures in the 70's. Pedestrians observed as walking on the plaza area between the fountain steps and the sidewalk were also included in this count. Existing pedestrian volumes crossing Cambridge Street between the two future headhouses were also recorded. Pedestrians tend to make a mid-block crossing in this area between the Two Center Plaza steps and City Hall Plaza. Counts were performed from 7 to 9 AM, 11 AM to 1 PM, and 4 to 6 PM.

On Wednesday, July 28, 1993, a warm but overcast day, a second pedestrian study was conducted at City Hall Plaza. This was

deemed to be a typical summer day with moderate to heavy pedestrian volumes compared to an average annual day. To conduct this study, two video cameras were set up on the 7th floor of Boston City Hall (courtesy of the Boston Transportation Department) above City Hall Plaza. One camera was directed toward the existing headhouse, the other toward Cambridge Street, approximately in the location of the proposed two new headhouses. Pedestrian flow patterns were videotaped from 8:30 to 9:30 AM, 11 AM to 1:00 PM, and 4:00 to 5:30 PM. The videotapes provide a permanent record of observed pedestrian movements, a basis for observing the pulses and ebbs of actual pedestrian flow conditions, (e.g., crowding at the existing headhouse entrance), and a basis for estimating the distribution of pedestrian flow movements during peak times.

Count and analysis summary sheets for both pedestrian studies are provided in separate Technical Appendix 8.

A.2 Existing Headhouse

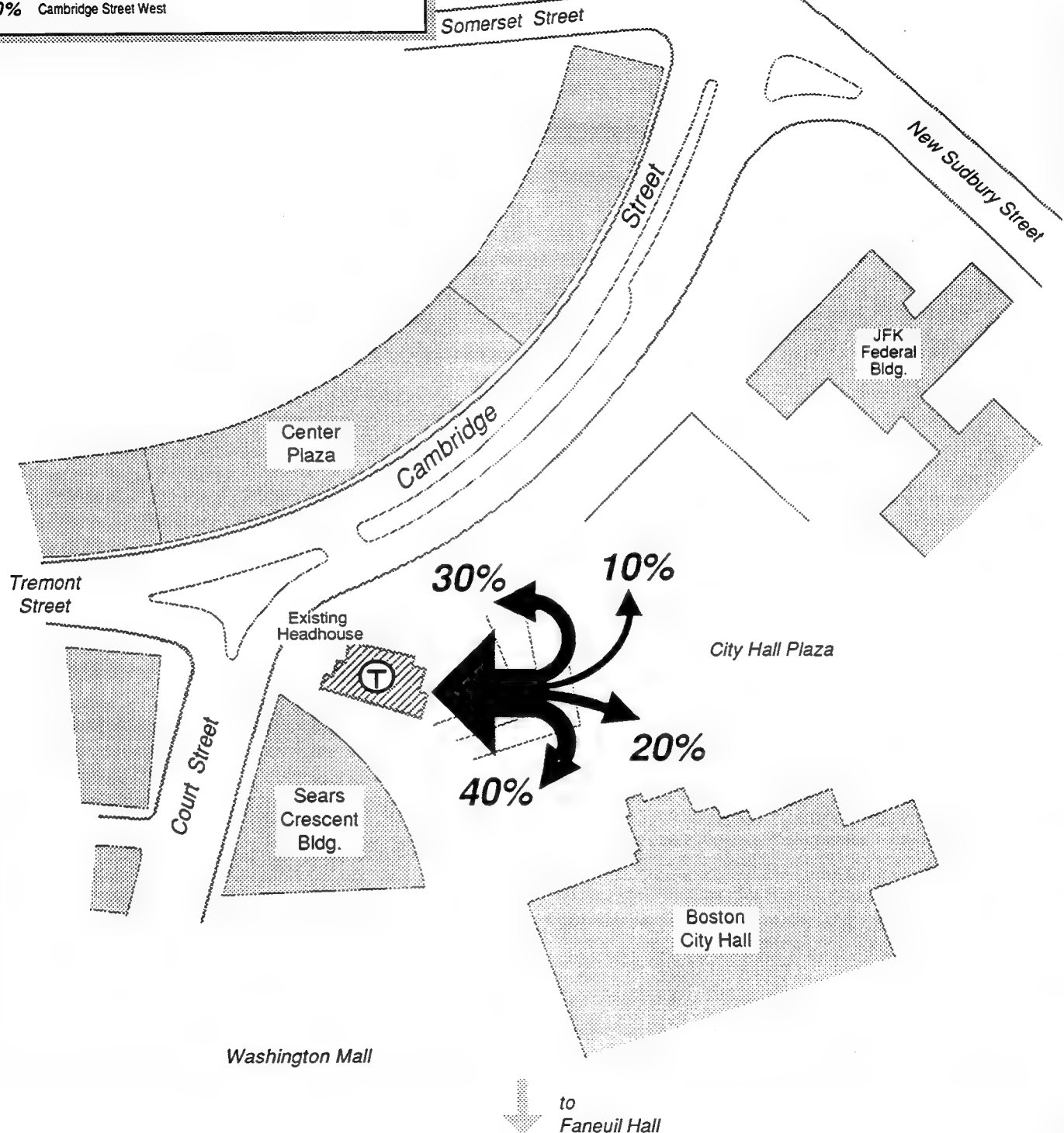
Existing Government Center headhouse pedestrian volumes by time of day are summarized on Table I.1. Approximately 5,475 pedestrians entered and 3,390 exited the Government Center headhouse during the 4.5 hours of videotaping. Peak inbound flows occurred from 4:30-5:30 PM; while peak outbound flows occurred from 8:30-9:30 AM.

Figure I.9 illustrates the existing pedestrian flow distribution pattern at the Government Center headhouse during the count periods from videotape observations.

Existing Government Center station *desire lines* -- i.e., the proportion of passengers coming to and from the station headhouse by direction -- were determined by summing pedestrian flow volumes entering and leaving the headhouse during the three count periods. Four primary desire lines were identified.

ORIGIN/DESTINATION SUMMARY

- 40%** Court Street, Sears Crescent Bldg., Washington Mall & Faneuil Hall
- 30%** Tremont Street
- 20%** City Hall & Northeast Corner of City Hall Plaza
- 10%** Cambridge Street West



Approximate Scale:
1 in. = 130 ft.

NOTE:
Based on counts taken in July 1993.
Distribution rounded to the nearest 5%.

GOVERNMENT CENTER STATION EXISTING PASSENGER DESIRE LINES

T Massachusetts Bay Transportation Authority
Blue Line Station Modernization FEIR

Figure I.9

Table I.1

**Existing Government Center Headhouse
Entering and Exiting Passenger Volumes
By Time of Day¹**

TIME	IN	OUT
8:30-9:30 AM	70	950
11:45 AM- 12:45 PM	610	780
4:30-5:30 PM	2160	680

1 Source: Fay, Spofford & Thorndike, Inc.

Approximately 40% of existing station passengers entered and exited to/from the Court Street area, the Sears Crescent Building and areas beyond such as Faneuil Hall and the Congress Street/State Street area. Approximately 30% entered and exited to/from Tremont Street area, while 20% entered and exited to/from City Hall to and from areas served through the northeast part of City Hall Plaza. The remaining 10% entered and exited to/from the Cambridge Street west area.

Passenger queuing observations were also made at the station entrance during all sessions. During approximately 15 minutes of the PM period, queued lines of passengers extended beyond the Government Center Station headhouse entrance into the plaza. While such crowding was not observed during the other two videotaping sessions (i.e., the AM and midday), similar headhouse crowding conditions occur with regularity, particularly following scheduled City Hall Plaza or Faneuil Hall events.

A.3 Cambridge Street Adjacent to Proposed Government Center Headhouses

Pedestrian volumes observed during the September 1992 and July 1993 studies at the proposed new headhouses were found to be very consistent. Table I.2 summarizes AM, midday, and PM peak hour pedestrian volumes on both sidewalks of Cambridge Street. The peak pedestrian flow hour of the

day on Cambridge Street adjacent to the proposed new headhouses occurs during the mid-day between 12:00 noon and 1:00 PM. Observations indicate the City Hall Plaza side of Cambridge Street typically carries approximately 50% more pedestrians than the Two Center Plaza side (i.e., approximately a 60/40 split of pedestrian flows).

The 1985 *Highway Capacity Manual* (HCM) Transportation Research Board Special Report 209 provides guidelines on the level of service (LOS) for various pedestrian activities including sidewalks/corridors, corner queuing, and crosswalks. Pedestrian LOS's are given the same letters used to define the quality of vehicular traffic flow. Six levels (A to F) are defined and illustrated on Figure I.10. Pedestrian flow conditions are defined in letters from A to F, from best to worst.

Table I.2

**Existing Cambridge Street
Pedestrian Volumes
By Time of Day¹**

TIME PERIOD	City Hall Plaza Side	Median Xings	Two Center Plaza Side
8:00-9:00 AM	660	380	480
12:00 Noon-1:00PM	1120	390	720
4:45-5:45 PM Peak	930	360	620

1. Source: Fay, Spofford & Thorndike, Inc.

LEVEL OF SERVICE A

Pedestrian Space: ≥ 130 sq ft/ped Flow Rate: ≤ 2 ped/min/ft

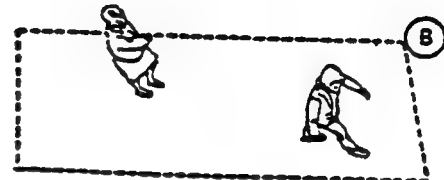
At walkway LOS A, pedestrians basically move in desired paths without altering their movements in response to other pedestrians. Walking speeds are freely selected, and conflicts between pedestrians are unlikely.



LEVEL OF SERVICE B

Pedestrian Space: ≥ 40 sq ft/ped Flow Rate: ≤ 7 ped/min/ft

At LOS B, sufficient area is provided to allow pedestrians to freely select walking speeds, to bypass other pedestrians, and to avoid crossing conflicts with others. At this level, pedestrians begin to be aware of other pedestrians, and to respond to their presence in the selection of walking path.



LEVEL OF SERVICE C

Pedestrian Space: ≥ 24 sq ft/ped Flow Rate: ≤ 10 ped/min/ft

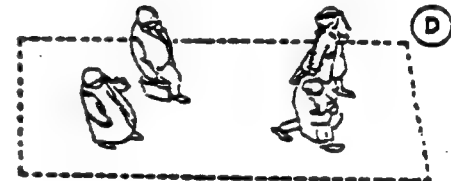
At LOS C, sufficient space is available to select normal walking speeds, and to bypass other pedestrians in primarily unidirectional streams. Where reverse-direction or crossing movements exist, minor conflicts will occur, and speeds and volume will be somewhat lower.



LEVEL OF SERVICE D

Pedestrian Space: ≥ 15 sq ft/ped Flow Rate: ≤ 15 ped/min/ft

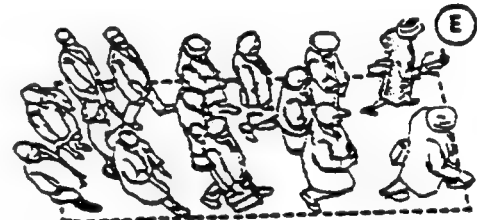
At LOS D, freedom to select individual walking speed and to bypass other pedestrians is restricted. Where crossing or reverse-flow movements exist, the probability of conflict is high, and its avoidance requires frequent changes in speed and position. The LOS provides reasonably fluid flow; however, considerable friction and interaction between pedestrians is likely to occur.



LEVEL OF SERVICE E

Pedestrian Space: ≥ 6 sq ft/ped Flow Rate: ≤ 25 ped/min/ft

At LOS E, virtually all pedestrians would have their normal walking speed restricted, requiring frequent adjustment of gait. At the lower range of this LOS, forward movement is possible only by "shuffling." Insufficient space is provided for passing of slower pedestrians. Cross- or reverse-flow movements are possible only with extreme difficulties. Design volumes approach the limit of walkway capacity, with resulting stoppages and interruptions to flow.



LEVEL OF SERVICE F

Pedestrian Space: ≤ 6 sq ft/ped Flow Rate: variable

At LOS F, all walking speeds are severely restricted, and forward progress is made only by "shuffling." There is frequent, unavoidable contact with other pedestrians. Cross- and reverse-flow movements are virtually impossible. Flow is sporadic and unstable. Space is more characteristic of queued pedestrians than of moving pedestrian streams.



ILLUSTRATIVE DEPICTION OF PEDESTRIAN WALKWAY LEVELS OF SERVICE

SOURCE:

Highway Capacity Manual - Special Report 209,
Transportation Research Board, 1985.

① Massachusetts Bay Transportation Authority

Blue Line Station Modernization FEIR

Figure I.11 summarizes AM, midday, and PM peak 15 minute period pedestrian flow volumes, effective walkway widths and existing sidewalk levels of service on both sides of Cambridge Street. The term 'effective walkway width' refers to the portion of each sidewalk which is not blocked by trees, columns, poles, etc. Peak 15 minute period pedestrian flow rates provide the basis for calculating sidewalk or corridor LOS. Version 2 of the Federal Highway Administration's Highway Capacity Software (HCS) package was used to calculate pedestrian sidewalk LOS's. Pedestrians observed as walking on the City Hall Plaza bricks between the sidewalk and the fountain steps were added to the sidewalk volumes to compute levels of service on the City Hall Plaza side walkway.

From Figure I.11, existing peak hour pedestrian volumes were handled at an excellent LOS A during all peak hours observed. It is noted that special events at City Hall Plaza increase pedestrian flows on the Plaza, particularly during the summer months. However, the segment of the Plaza adjacent to Cambridge Street where the headhouse is proposed does not appear to be as busy as other areas of the Plaza. Special events appear to be more focused on the west/southwest area of City Hall Plaza between City Hall and the existing headhouse, and the southeast stage area near Congress Street.

I.4.B State Station Existing Conditions

State Station serves both the Orange and Blue Lines. It has two existing headhouses; one is located under the Old State House and the other is located on the Washington Mall at 28 State Street. According to April 1992 counts, the existing headhouses served approximately 16,680 daily entering passengers. Of these, approximately 69% or 11,510 are Orange Line riders and 31% or 5,170 are Blue Line riders.

A study of existing pedestrian flow patterns was conducted in the vicinity of the proposed two State Station headhouses at 60 and 53

State Street on July 29, 1993. While pedestrian volumes related to workers may be higher after labor day when vacations are over, the lower worker volumes tend to be offset by higher tourist volumes. This augments a series of comparable manual counts of pedestrian and traffic volumes at the intersection of State and Congress Streets conducted for the MBTA during the last week of October, 1989.

Pedestrian flow patterns at the intersection of State Street/Congress Street were videotaped using two cameras placed at an elevated vantage point within 60 State Street (courtesy of Koll Management Services). One camera was focused toward the entire intersection with direct focus on the location of the proposed headhouse at 53 State Street.

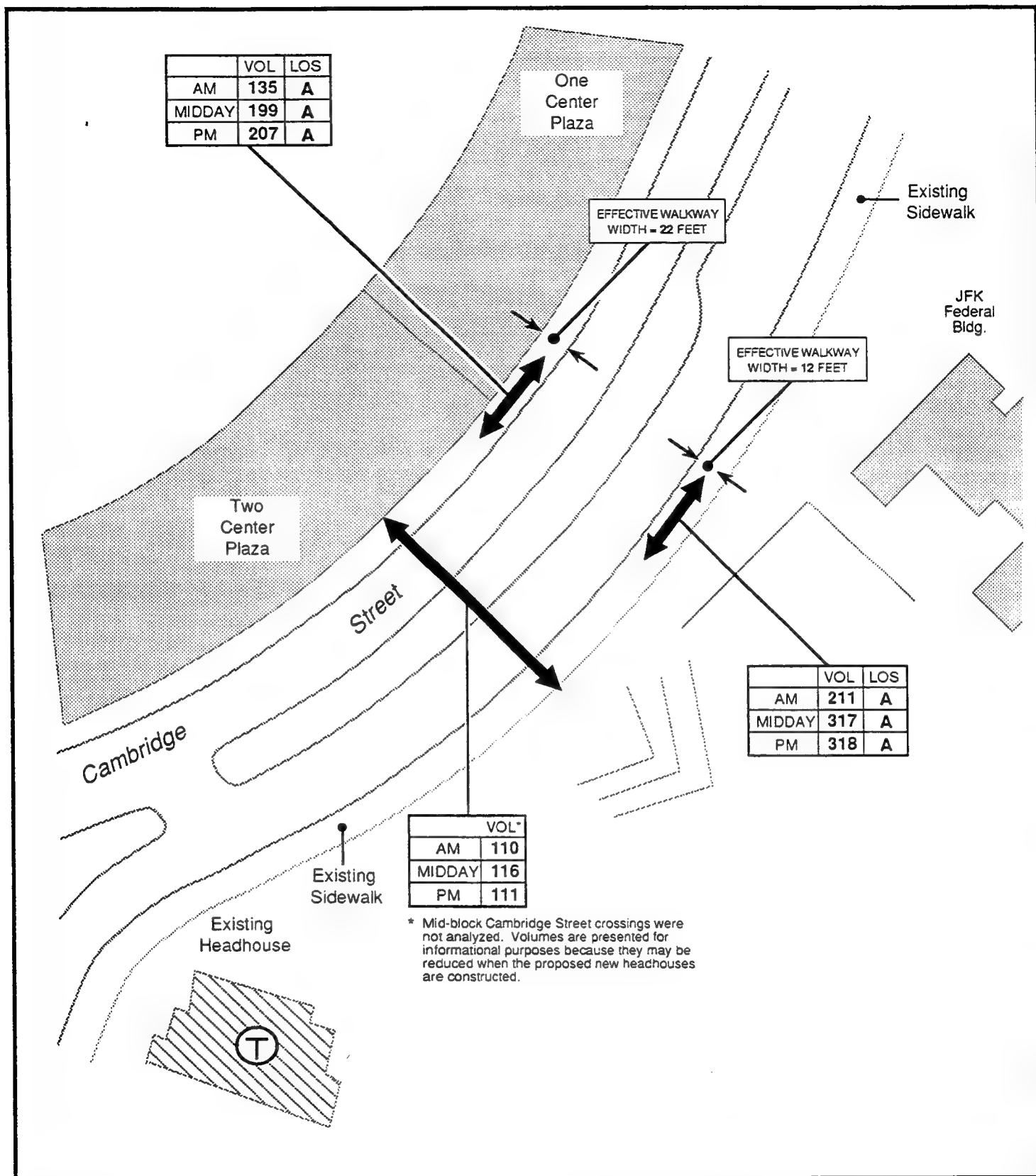
The other was oriented toward the location of the proposed headhouse at 60 State Street. Pedestrian flow patterns were recorded for 5 hours between 8:00 to 9:30 AM, 11:00 AM to 1:00 PM, and 4:00 to 5:30 PM.

B.1 State Station Pedestrian Flow Patterns at Congress and State Streets

Heaviest pedestrian volumes were observed crossing Congress Street at the 53 State Street corner to and from the Bank of Greece corner and at the 60 State Street corner to and from the 28 State Street corner.

Observations indicate that the crosswalk on the west side of Congress Street has the lowest volumes of the four crosswalks at the intersection. While crossings on this particular crosswalk have not been included in this analysis, observations indicate existing volumes operate at LOS A. Pedestrian volumes using this crosswalk will be unaffected after this project is completed.

Of relevance to this analysis are desire lines indicating how pedestrians access the existing State Station headhouse at the Old State House. These desire lines are depicted on Figure I.12.



Approximate Scale:
1 in. = 130 ft.

SOURCE: Fay, Spofford & Thorndike, Inc.
September 1992 counts.

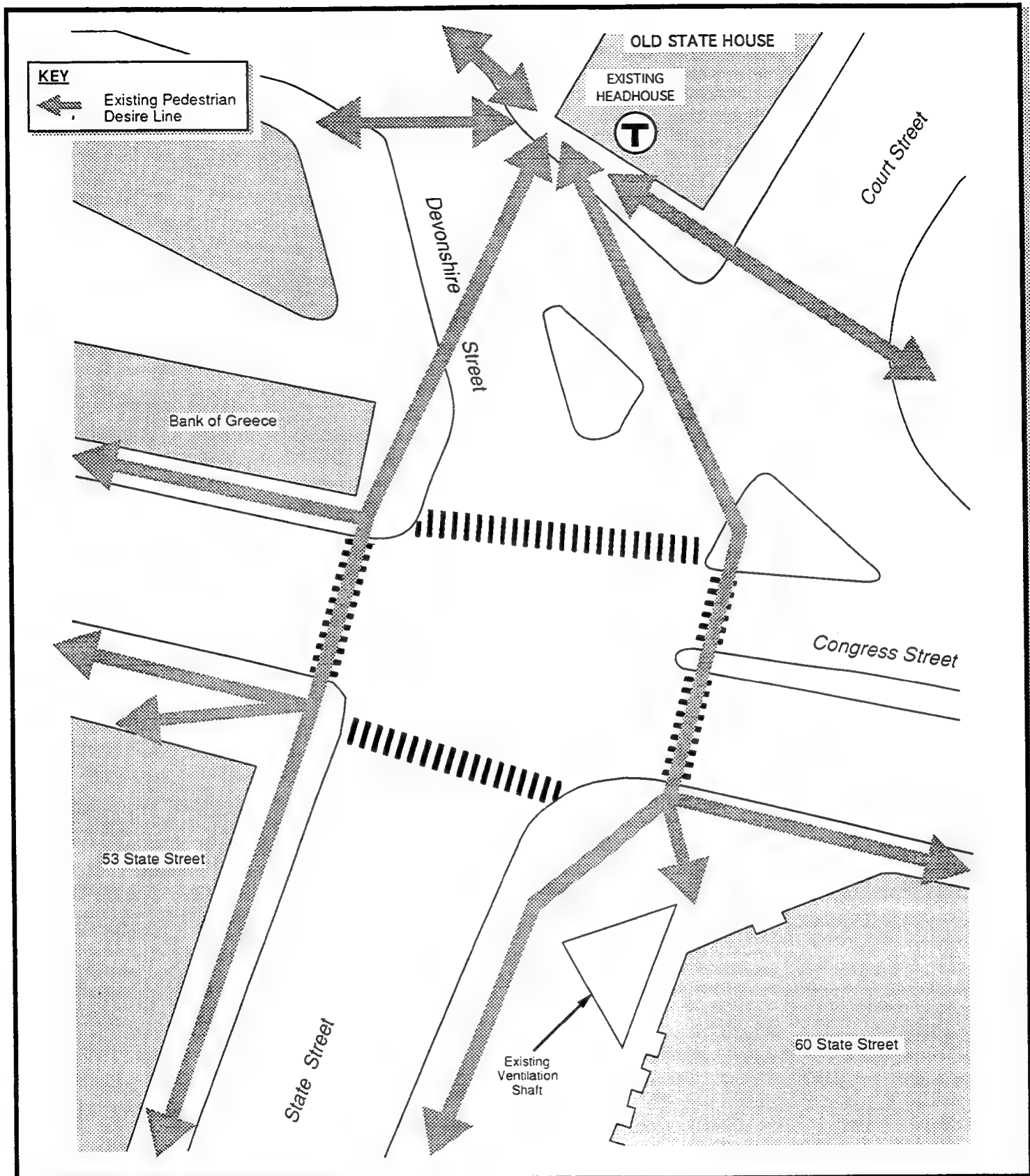
Volumes represent two-way sidewalk volumes
for the peak 15 minutes of the peak hour.

GOVERNMENT CENTER STATION EXISTING CAMBRIDGE STREET PEDESTRIAN SIDEWALK VOLUMES AND LEVELS OF SERVICE

Ⓣ Massachusetts Bay Transportation Authority

Blue Line Station Modernization FEIR

Figure I.11



Approximate Scale:
1 in. = 40 ft.

STATE STATION

EXISTING PEDESTRIAN DESIRE LINES
(STATION ACCESS AND EGRESS ONLY)

Ⓣ Massachusetts Bay Transportation Authority

Blue Line Station Modernization FEIR

Figure I.12

Observations indicate the heaviest pedestrian movements flowing to and from the State Station occur via the northeast and southeast corners of State at Congress Streets. A large portion of AM and PM peak hour pedestrian activity at this intersection is related to commuter travel to and from the State Station Old State House entrance/exit; another significant portion is related to the Freedom Trail which traverses the northwest to the northeast corners of the intersection.

B.2 Pedestrian Capacity Analysis

Figure I.13 depicts existing observed peak 15 minute pedestrian volumes and crosswalk LOS at State Street and Congress Streets. Crosswalk analysis was performed on the three crosswalks connected to 53 and 60 State Street corners. Refer back to Figure I.10 for a depiction of crosswalk level of service criteria. During the AM peak period, the heaviest pedestrian traffic was observed traveling toward 53 and 60 State Street buildings. During the PM period, pedestrian traffic was reversed, heading towards the Bank of Greece building and 28 State Street building.

Due to heavy commuter platoons exiting and entering State Station, the Congress Street crosswalk connecting the Bank of Greece to 53 State Street experienced a crowded LOS E during the AM and PM peak periods. In the analysis, the existing ten (10) foot crosswalk was used which may contribute to the LOS E on the crosswalk between the Bank of Greece to 53 State Street. Observations indicate that crossings occur in waves which are 16-25 feet in width during peak hours-- well beyond the edges of the painted crosswalk.

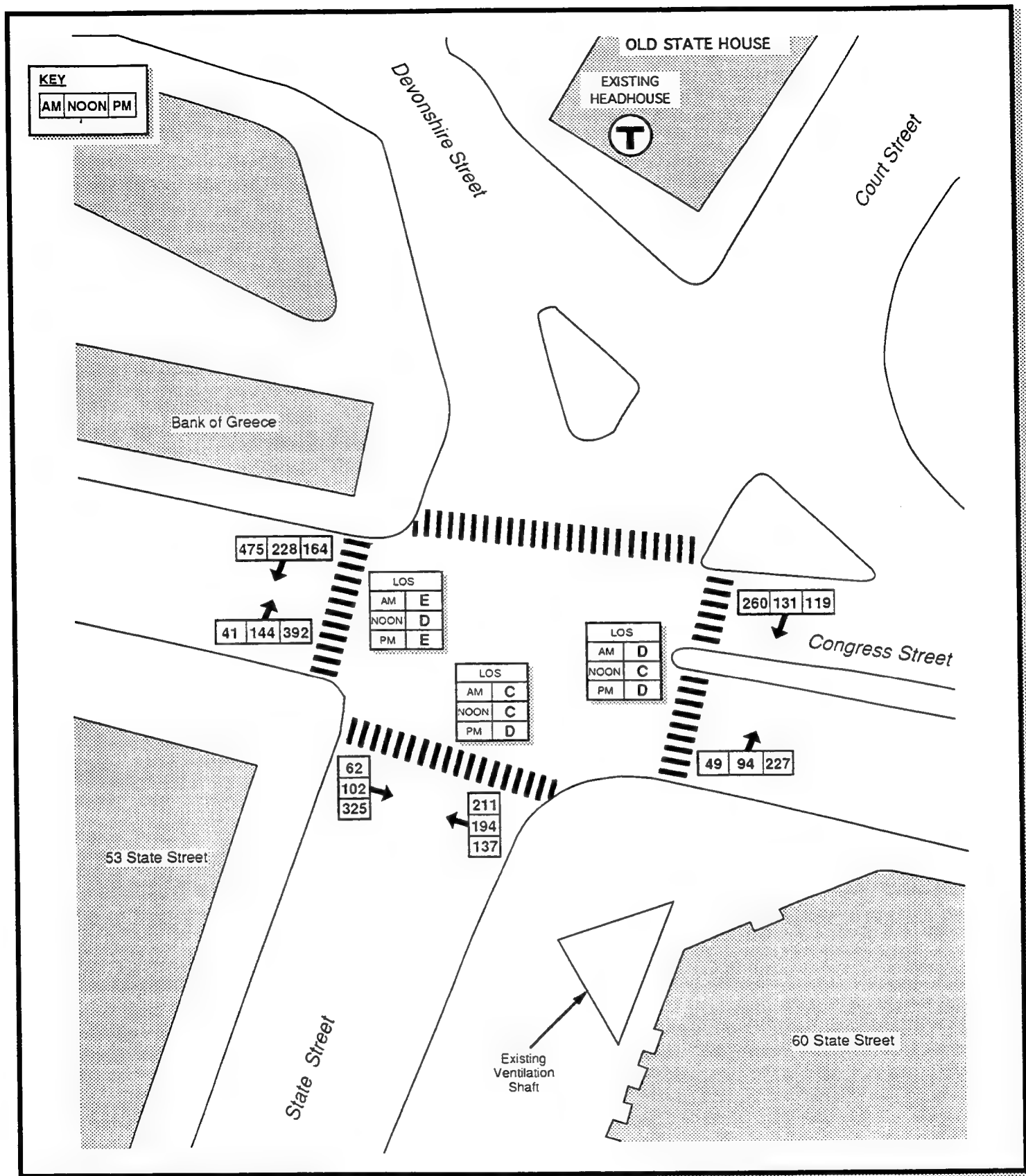
During peak periods, pedestrian queuing was observed at all four corners and at the Congress Street median and right turn channelization island. By far, the most constricted corners were at the Bank of Greece and 28 State Street, rather than the 53 and 60 State Street corners. While pedestrian queuing at 53 State Street and 60 State Street corners did occasionally overflow onto State Street during the Congress Street green traffic

signal phases, both corners have ample depth to provide adequate waiting room for queued pedestrians. While these corners are probably more constricted during winter months when snow has accumulated, there appears to be four to six times as much space for queuing pedestrians than is needed at the present time. Pedestrians were observed as waiting on all four corners in a pattern more oriented towards the edge of Congress Street than State Street -- generally reflecting heavier desires to cross Congress Street than State Street.

Pedestrians were not observed queuing up within the future footprints where headhouses at 53 and 60 State Streets are proposed -- i.e., they were observed as waiting to cross Congress or State Streets in areas outside of the future headhouse footprints on the edges of sidewalks adjacent to the travelled ways.

Figure I.14 depicts existing sidewalk corner levels-of-service criteria. Figure I.15 depicts the corner analysis results for the existing 60 State Street and 53 State Street corners.

Based on the existing geometric configuration, both corners have more than adequate space (i.e., at LOS A-B during all peak hours) to accommodate existing maximum observed pedestrian queuing volumes and have considerable area to accommodate significant growth in pedestrian corner volumes.



Approximate Scale:
1 in. = 40 ft.

Notes:
Based on Counts taken in July 1993.
Pedestrian Volumes Represent the
Peak 15 minutes of the Peak Hour.

STATE STATION

EXISTING PEDESTRIAN VOLUMES AND CROSSWALK LEVELS OF SERVICE (LOS)

T Massachusetts Bay Transportation Authority

Blue Line Station Modernization FEIR

Figure I.13

LEVEL OF SERVICE A

Average Pedestrian Area Occupancy: 13 sq ft/person or more

Average Inter-Person Spacing: 4 ft, or more

Description: Standing and free circulation through the queuing area is possible without disturbing others within the queue.

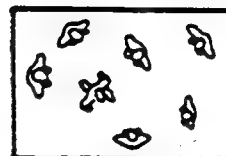


LEVEL OF SERVICE B

Average Pedestrian Area Occupancy: 10 to 13 sq ft/person

Average Inter-Person Spacing: 3.5 to 4.0 ft

Description: Standing and partially restricted circulation to avoid disturbing others within the queue is possible.

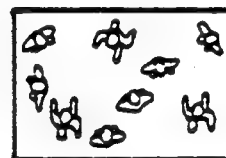


LEVEL OF SERVICE C

Average Pedestrian Area Occupancy: 7 to 10 sq ft/person

Average Inter-Person Spacing: 3.0 to 3.5 ft

Description: Standing and restricted circulation through the queuing area by disturbing others within the queue is possible; this density is within the range of personal comfort.

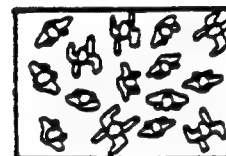


LEVEL OF SERVICE D

Average Pedestrian Area Occupancy: 3 to 7 sq ft/person

Average Inter-Person Spacing: 2 to 3 ft

Description: Standing without touching is possible; circulation is severely restricted within the queue and forward movement is only possible as a group; long term waiting at this density is discomforting.

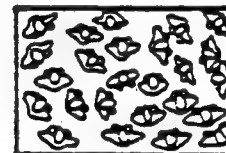


LEVEL OF SERVICE E

Average Pedestrian Area Occupancy: 2 to 3 sq ft/person

Average Inter-Person Spacing: 2 ft or less

Description: Standing in physical contact with others is unavoidable; circulation within the queue is not possible; queuing at this density can only be sustained for a short period without serious discomfort.

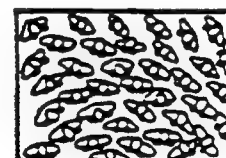


LEVEL OF SERVICE F

Average Pedestrian Area Occupancy: 2 sq ft/person or less

Average Inter-Person Spacing: Close contact with persons

Description: Virtually all persons within the queue are standing in direct physical contact with those surrounding them; this density is extremely discomforting; no movement is possible within the queue; the potential for panic exists in large crowds at this density.



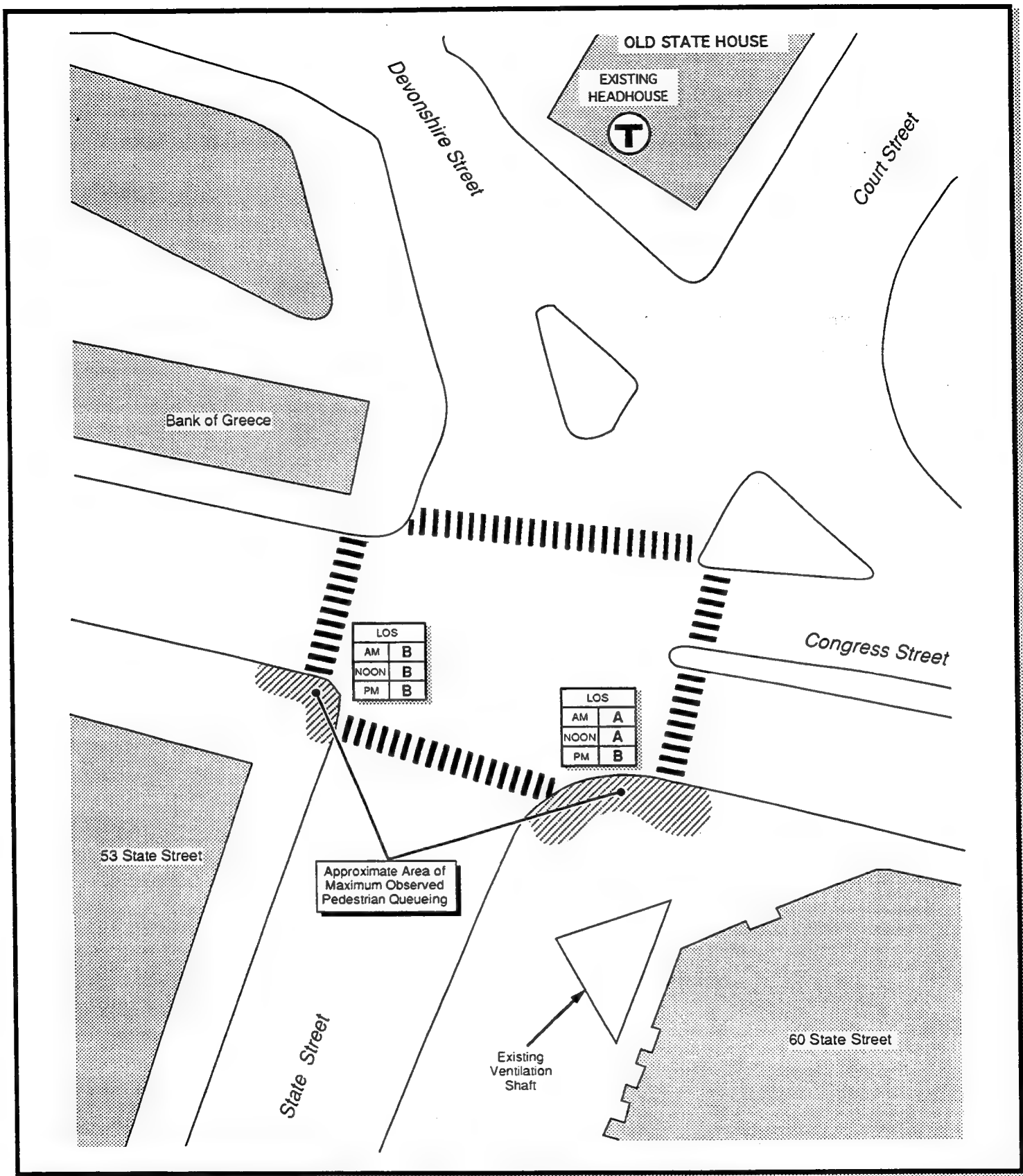
ILLUSTRATIVE DEPICTION OF PEDESTRIAN CORNER QUEUEING LEVELS OF SERVICE

SOURCE:

Highway Capacity Manual - Special Report 209,
Transportation Research Board, 1985.

Ⓜ Massachusetts Bay Transportation Authority

Blue Line Station Modernization FEIR



Approximate Scale:
1 in. = 40 ft.

Note:
Based on Counts taken in July 1993.

STATE STATION

EXISTING PEDESTRIAN CORNER STORAGE LEVELS OF SERVICE (LOS)

Massachusetts Bay Transportation Authority

Blue Line Station Modernization FEIR

Figure I.15

1.5 AFFECTED ROADWAY ENVIRONMENT - REVERE BEACH STATION (REVISION FROM DEIR)

Revere Beach Station passengers will be affected during the Blue Line shuttle bus replacement period. Refer to Section III of the DEIR for a detailed description of the shuttle bus replacement service to be provided along Ocean Avenue. This FEIR revision involves only the description of on-street parking characteristics along Ocean Avenue. An incorrect description of the parking regulations was provided in the DEIR, as noted in comments by the Point of Pines Beach Association. However, none of the graphical displays or capacity analyses contained in the DEIR are affected by this revision (i.e., the analysis lane use assumptions do not change).

Ocean Avenue is a Metropolitan District Commission (MDC) parkway. At its signalized intersection with Shirley Avenue, Ocean Avenue has two travel lanes in each direction plus parking lanes. North of Shirley Avenue, parking is restricted on both sides of Ocean Avenue on weekdays between 7:00 AM and 9:30 AM. South of Shirley Avenue, alternate side parking is allowed on the Ocean Avenue between 7:00 AM and 9:30 AM.

Shirley Avenue has two approach lanes in the eastbound direction and one approach lane in the westbound direction. Between Ocean Avenue and Revere Beach Parkway, Shirley Avenue is two-way with no parking. Ocean Avenue intersects Shirley Avenue at the crest of a hill.

Refer back to the DEIR for daily, AM and PM traffic volume data at the intersection of Shirley and Ocean Avenues and existing traffic operational conditions during the morning and afternoon peak hours. Revisions to the DEIR on-street parking environment conditions do not affect the existing LOS computations reported in the DEIR. These computations correctly assumed two approach lanes on Ocean

Avenue at its intersection with Shirley Avenue during all peak hours. This intersection operates at LOS B or better throughout the day.

1.6 AFFECTED HISTORICAL AND ARCHAEOLOGICAL ENVIRONMENT (REVISION FROM DEIR)

During the Notice of Project Change, prior to the publication of the DEIR, the Massachusetts Historical Commission (MHC) requested that a reconnaissance level survey be conducted for the project area between Bowdoin Station and State Station in downtown Boston to identify areas likely to contain historic and prehistoric archaeological sites in project impact areas.

In response to MHC's request, and as a subconsultant to Fay, Spofford & Thorndike, Inc., Boston Affiliates, Inc., with Alan E. Strauss as Principal Investigator, undertook an archaeological reconnaissance survey under MHC permit number 1281. This study is documented in a report entitled *Archaeological Reconnaissance Survey, Blue Line Station Modernization Project, Bowdoin to State* (Boston Affiliates, Inc., July, 1993) and is provided in separate Technical Appendix 9 to this FEIR. In a letter to MEPA dated October 4, 1993, the MHC reviewed and concurred with the findings of the Survey. This letter is also provided in separate Technical Appendix 9.

The goals of the reconnaissance survey were to identify whether archaeological resources exist in the project area, whether they meet the criteria for listing in the National Register, and whether the proposed project will impact them adversely. The reconnaissance survey consisted of background research followed by an assessment of existing conditions and isolation of areas believed to have the greatest potential to contain undisturbed cultural resources.

Because the project is in an area which has undergone centuries of intensive development with consequent disturbance, assessment of existing conditions and major disturbances within the project area was a crucial component of the Phase I archaeological study.

Therefore, an extensive analysis of site disturbance was undertaken, including review of current utility maps and archival research to determine previous roadway and transit construction techniques.

A walkover of the project area was undertaken, focusing on the two project impact areas at State and Congress Streets and Government Center. During the walkover reconnaissance, special attention was paid to visible subsurface disturbance including subway tunnels, underground parking garages, service vaults, etc. These data were then collated with maps, subway and utility plans.

Based on the results of the background research, impact assessment, and on observations made during the walkover, it was considered unlikely that any intact prehistoric or historical sites exist within the State Street or Government Center Project Areas. These areas appear not to contain resources that would be eligible for National Register nomination, and no further archaeological work is recommended for the State Street or Government Center Project Areas.

Following is a summary of existing conditions at impact areas of State and Government Center Stations from the Archaeological Reconnaissance Survey. To ease readability, all reference graphics have been placed at the back of this subsection.

I.6.A Existing Conditions

A.1 Subsurface Structures and Utilities

Archaeological surveys within major cities entail a number of unique problems that are not encountered in "country sites." The vast

amount of construction and reconstruction that has taken place in the city of Boston since its inception has likely disrupted many if not all of the archaeological sites. The construction of roads, bridges, tunnels, offices, buildings and related utilities such as electric, gas, water, sewerage, steam pipes, storm drains, and telephone lines has taken a great toll on archaeological sites.

Furthermore, because Boston was greatly expanded from its original Shawmut Peninsula, much filling and grading has taken place in the city.

Both the Government Center and State Street locations are as intensely developed sites as any in Boston. Therefore, an extensive analysis of site disturbance was undertaken, including review of current utility maps and archival research to determine previous alignments and construction techniques

There are four major types of disturbance in the area: subways, utilities, basements and fill. Each of these is described below for the two project impact areas.

A.2 State Street Project Area

Subway Construction Impact

East Boston Tunnel

The present Blue Line beginning with the East Boston subway tunnel under the harbor was started in 1900 and opened for service in December 1904. On the Boston side, the first station on the line was Atlantic Chambers, now Aquarium; the next station, originally known as Devonshire Street but now called State, was built under the Old State House.

The stretch of tunnel between Aquarium and State which passes through the project area was built in 1902-3 in two sections, Section D and Section E (Figure I.16). Section D extended for a distance of 700 feet from India Street to the point where the tunnel meets the present State Station; above ground the westerly end of Section D is the westerly end of the Exchange Building and former

Hospital Life Insurance Building, a site now occupied by the present 60 State Street.

Section D was built in stages in order to maintain street traffic and continuous sewer service. First the side walls and side sewers were built, then the arch of the tunnel, and finally the core of earth was removed and the invert put in. The side walls and sewer were built by open cut; the old sewer that ran down State Street was removed and a new sewer built adjacent to the side wall on each side of the street; the street was excavated to a depth of 18 to 24 inches below the visible portion of the arch for the construction of the arch; the arch was built and waterproofed and the street backfilled; and the core was removed and invert constructed [Boston Transit Commission (BTC) 1903: 36-39].

Two plates from the BTC's 1902 annual report show cross sections of State Street. Plate 12 (Figure I.17 of this report) depicts a cross-section 23 feet west of Broad Street. This location is east of the project area on State Street; it shows an excavation 29 feet deep, and excavation and backfill width of 35 feet for the construction of the tunnel; the excavation extends under the sidewalk on the left hand side. Plate 13 (Figure I.18 of this report) shows the cross-section about 25 feet east of Merchants Row, also east of the project area: the excavation here is 27 feet deep and 36 feet wide, and also extends under the sidewalk; in this view, the foundations of the abutting buildings meet the tunnel excavation, indicating that the entire street from building to building has been disturbed.

A cross-section on Plate 11 of the BTC's 1903 report (Figure I.19 in this report) depicts a point 20 feet east of Change Avenue, approximately at the building entrance at 53 State Street. This cross section shows an excavation of about 23 feet deep and 35 feet wide, with backfilling areas extending under the sidewalk. On the left hand side of the diagram, the foundations of 53 State Street extend under the sidewalk.

Section E of the 1902 tunnel included the passenger station at the Old State House, and extends from about 37 feet east of Congress Street to Washington Street. The passenger station in Section E, now State Station, is of the side platform type, with tracks between opposite platforms. The excavation was about 25 feet deep. The side walls of the platform were built of reinforced concrete, with new sewers on the outside face of the walls; the roof over the portion of the station under the street was built of concrete arches on steel girders. The annual report does not describe the construction methods in the same detail as for Section D, but given the closeness of the station arch to the street surface, it is presumed the structure was built in a similar manner using a succession of open cut sections (BTC 1903: 39-41).

State Station is shown in plan and cross section on Plate 11 (Figure I.19 of this report). At the east side of Devonshire Street, shown in the cross section, the station and the adjacent utilities occupy a width of 82 feet; on the center line of Congress Street, the station itself, without utilities, occupies a width of 50 feet.

As a result of the construction of Section E of the East Boston Tunnel and relocation of utilities, disturbance of State and Congress Streets between the sidewalks was virtually total.

Conversion to Third Rail

In 1924, trolley service on the East Boston Line was converted to third rail train service. For this changeover, new rails were laid, platforms raised, and stations reconfigured. All of this work was done within the existing tunnel and stations, and there was no new excavation (BTC 1924: 29).

Utilities Impact

Existing Utilities

As discussed in the DEIR, underground utilities, including electrical, gas, sewer, storm drains and telephone, extend along

State and Congress Streets, mainly on each side of the Blue Line tunnel (Figure I.20).

Utility Lines Before the Construction of the East Boston Tunnel

State Street, before the construction of the East Boston Tunnel, was the route of numerous utility lines: sewers, water pipes, gas pipes, telephone, electrical and telegraph conduits, fire alarms and steam pipes. In discussing progress on Section D of the East Boston Tunnel (the section between India Street and the easterly end of the present Blue Line State Station), the Boston Transit Commission's annual report for 1902 describes some of the obstacles to construction:

When the sewers on each side of the street [State Street] have been completed and house connections made thereto, the old sewer near the middle of the street which is in the way of the arch of the tunnel can be abandoned; and when the sidewalls are well under way the slow and tedious work can begin of relaying in a more orderly manner such of the tangled network of pipes and ducts as interfere with the tunnel construction. Plate 16 may give an idea of some of the underground objects to be found in this vicinity (BTC 1902: 31).

The aforementioned Plate 16 appears as Figure I.21; it shows the project location and State Street and adjoining streets with extensive underground utilities from sidewalk to sidewalk. The BTC's annual report for the following year describes these utilities in more detail:

The condition which obtained below the surface of State street at Congress and Devonshire streets prior to the construction of the East Boston tunnel is shown in part by a plan published in the report of this Commission for 1902. The sewers, waterpipes, gaspipes and electric conduits occupied the greater part of the

available space between curbs to a depth of 12 feet, and between Merchants row and the Old State House they all lay for some portion of their length in the way of the proposed Tunnel. All of the principal companies and city departments using electric conduits in Boston were represented in State street, and the number of wires below ground between Devonshire and Congress streets was such that if they were strung separately on cross arms of the maximum size a pole line 675 feet high, or more than three and one-half times the height of the Ames building, would be required to carry them (BTC 1903: 43).

The above description of utilities under State Street and their representation on Plate 16 (Figure I.21 in this report) are indicative of extensive disturbance of State Street in the project area even before the construction of the East Boston Tunnel.

When the tunnel was subsequently built, all of these utility lines had to be replaced. For Congress Street, there is no verbal description of underground utilities, but the representation on Figure I.21 suggests equally extensive disturbance on Congress Street.

Basements and Foundations Impacts

53 State Street

53 State Street, the Exchange Building, was built in 1889-91, an eleven-story masonry building with a basement. The building is constructed with a granite foundation which extends under the sidewalk (shown diagrammatically in the building section in Figure I.22). On State Street, the building had coal vaults below the sidewalk, and a connecting passage from the Blue Line outbound platform into the basement. The tower addition at the rear was built in 1984 (BLC Building Information Form, 53 State Street; BLC Study Report, The Exchange Building, 1979: 3).

The plaza on the Congress Street side of the Exchange Building was occupied by the State Street Trust Company, 10 Congress Street, until 1980, when it was demolished for the construction of the plaza and the Exchange Building. The building was a five-story masonry building with a basement (BLC Building Information Form, 10 Congress Street; BLC Study Report, The Exchange Building, 1979: 5). The new entrance kiosk to be built on the Congress Street plaza will penetrate the former basement area of 10 Congress Street (Figure I.23).

60 State Street

60 State Street is a 38-story office tower built in 1973-74 with a three-level parking garage below the sidewalk built behind a concrete slurry wall. The new State Station entrance kiosk directly serving the Blue Line inbound platform is to be built on the north side of State Street in the uppermost basement level of 60 State Street (Figure I.23).

Fill

A schematic subsurface profile of the existing tunnel area shows a 10-foot thick stratum of "miscellaneous fill" under State Street on either side of the tunnel (Figures I.22 and I.24). This would indicate that any prehistoric or historical artifacts that were within the top 20-25 feet have been disturbed.

Summary

A schematic view of disturbances is shown in Figure I.25. The inevitable conclusion is that as a result of utility construction before the East Boston Tunnel was built, the construction of 53 State Street and 10 Congress Street, the construction of the East Boston Tunnel and relocation of utilities, and the construction of 60 State Street, the project area is entirely disturbed and no archaeologically intact areas are expected within the project area.

A.3 Government Center Project Area

Subway Construction Impact

East Boston Tunnel Extension

The East Boston line (now the Blue Line) extended underground from East Boston up State Street and originally terminated at Court Street Station when the line was built in 1900-4. In 1912-16 the line was extended to Bowdoin Square, with stops at Scollay Square Under (now Government Center) and Bowdoin. The section of construction which encompassed the project area was Section G, which extended from Scollay Square near the southerly side of Cornhill (the Steaming Kettle) to a point opposite Stoddard Street, near where the present Somerset and Cambridge Streets intersect.

At the beginning of the East Boston Tunnel Extension near Washington street, the grade of the old tunnel was lowered, the Court Street Station abandoned and a new station built in Scollay square below the old station of Tremont Street Subway, with transfer connections between the two.

The construction of this tunnel required the careful supporting and underpinning of the front walls or piers of many adjacent buildings. Some of the most difficult work required was the supporting of the old Scollay Square Station and not interrupting traffic of the cars while the earth was being excavated and the foundations placed for the new station below (BTC 1915: 44-45).

The new Scollay Square Under Station connected with the existing Tremont Street Subway Station [now Green Line] above it; and a new entrance was also created at the north end of the platform. This entrance at the corner of Hanover and Court Street connected to a mezzanine lobby "about 10 feet in height . . . constructed over the tunnel roof, furnishing room for ticket offices for the Hanover street entrance, and space for storage purposes" (BTC 1913: 47). Figure I.26 shows this mezzanine with the project impact areas superimposed on it, and Figure I.27 shows the same area at street level.

When Court Street was widened in 1925, the Hanover Street entrance stairs were moved about 30 feet to the east.

From Scollay Under to Bowdoin Square, the tunnel was built by cut and cover methods (although the words "cut and cover" are not used in the BTC's annual reports for 1913-15, it is evident that these methods were used. The top of the tunnel is 20 feet below the present street surface, too close to the surface for bored tunneling techniques) (see Figure I.28).

Conversion to Third Rail

In 1924, trolley service on the East Boston Line was converted to third rail train service. For this changeover, new rails were laid, platforms raised, and stations reconfigured. This work was done within the existing tunnel and stations, and no new excavation was needed (BTC 1924: 29).

Government Center Station

As components of the 1960s construction of Government Center, Cambridge Street was widened and the Green Line Government Center Station rebuilt, with an entrance/exit at the plaza level and the station itself below, above the old Blue Line Station (see Figure I.29).

Utilities Impact

Utility lines extend along Cambridge Street, extending over the Blue Line Tunnel, and in some places, under the sidewalk. In particular, the site of the proposed kiosk on the east side of Cambridge Street is traversed by several utility lines (Figure I.30).

Basements and Foundations Impacts

Center Plaza on the west side of Cambridge Street was built in 1969. Its below grade parking garage extends to the arcade edge at the curb (see Figure I.28). On the plaza side of Cambridge Street, a sunken fountain, shown most clearly on Figure I.31, penetrated the surface.

Fill

Widening of Court Street

In 1924 and 1925, Cambridge Street was widened from its junction with Court Street to Charles Circle to assist the flow of traffic to Cambridge (Bower 1987: 15), and Court Street from Cambridge to Brattle Streets was also widened and straightened on its east side. The street widening line is shown on Figure I.27. As a result of this construction, a portion of the project impact area that had been within the building footprints at the corner of Hanover and Court Street now became part of the new Court Street.

Government Center Urban Renewal Project

The Government Center Urban Renewal Project in the 1960's brought extensive changes to Cambridge Street and adjacent blocks. City Hall Plaza was constructed in 1968, the same year in which the Boston City Hall was completed. At that time, the area near the fountain next to the J.F. Kennedy Federal Office Building was regraded with 10 to 20 feet of fill to match the grade of Cambridge Street, according to a long-time employee of the Boston DPW (Carmine Buono, personal communication, July 15, 1993).

Subsurface exploration shows a stratum of about 15 feet of "miscellaneous fill" at the project area (Figure I.16 and I.17). This would indicate that any prehistoric or historical artifacts that were within the top 25 feet have been disturbed.

For the construction of City Hall Plaza, all existing buildings were demolished, and several streets, including Hanover Street, were subsumed into the plaza. The present day Green Line from Haymarket to Government Center still follows the alignment of Hanover Street.

Summary

A schematic view of disturbances is shown in Figure I.32. It appears that subway

construction, installation of utilities, the widening of Court Street in 1925, and the realignment of Cambridge Street and construction of City Hall Plaza in the 1960's have significantly disturbed all portions of the project impact area.

16.B Results of the Walkover Reconnaissance Survey

In order to assess present day conditions, a walkover reconnaissance survey of the project corridor was undertaken on October 26, 1992, with special attention paid to the two project impact areas at State and Congress Streets, and Government Center.

The archaeologist noted the ensemble of historic buildings in the vicinity of the State Street project area, several listed on the National Register of Historic Places. The Old State House, a National Historic Landmark, stands in its original location at the head of State Street, defining the original ground level. In front of the building is the site of the Boston Massacre.

By contrast, the site of the Government Center project impact area has been completely remade above ground since 1960. During the walkover reconnaissance, the following features were noted: existing surface conditions, surface materials (concrete, asphalt, granite, brick, etc.), utility manholes, visible subsurface disturbance (subway tunnels, underground parking garages, service vaults, etc.), on-going construction projects and current land use. These data were then collated with maps, subway and utility plans.

A summary of existing conditions noted during the walkover is presented below for each project impact area.

B.1 State and Congress Street Project Area

At State and Congress Streets, work will take place in two separate areas: the major area comprises a portion of State Street between Congress and Kilby, and sidewalk/plaza area

on either side; and a smaller area is under State Street traffic lanes in the intersection of State and Congress Streets.

The larger impact area includes an area 65 feet by 45 feet comprising a strip of granite paved plaza and sidewalk and a narrow strip of asphalt paved street along Congress Street in front of Exchange Place; a strip of granite sidewalk 65 feet by 10 feet along the State Street side of Exchange Place; the entire width of a portion of State Street, paved with asphalt, 36 feet by 85 feet; and an area 65 feet by 40 feet comprising sidewalk and plaza in front of 60 State Street, paved in brick set in concrete. Observations in this impact area appeared to confirm the information derived from plans concerning the Blue Line Tunnel and building basements and garages.

The smaller impact area (65 feet by 10 feet) includes a strip of asphalt paved street.

B.2 Government Center Project Area

At the Government Center location, work will take place on both sides of Cambridge Street: on the sidewalk under the arcade of Center Plaza, and near the fountain on City Hall Plaza next to the Kennedy Building, the former location of the intersection of Court and Hanover Streets.

The walkover survey appeared to verify the information derived from plans that the parking garage at Center Plaza extends under the sidewalk, and that therefore the work on this side of Cambridge Street will take place within the garage; therefore this area was dropped from further consideration.

From the Center Plaza arcade, the project impact area stretches across asphalt paved Cambridge Street to a brick-in-concrete paved sidewalk with a double planter strip of trees. The impact area on City Hall Plaza consists of flat Plaza area paved with brick set in concrete, and extends into an area of granite steps leading down to the fountain area. These observations confirmed the information obtained from site plans.

1.7 AFFECTED NOISE ENVIRONMENT (REVISION FROM DEIR)

The City of Boston Environment Department noted that the City Air Pollution Control District noise standards cited in the DEIR do not exist and that this FEIR should compare existing and future noise levels to City standards. City and State noise standards are summarized in Table I.3 which follows.

Refer to the DEIR and Appendix 5 for noise term definitions and temporal data related to these noise measurements. While it is unclear whether these standards legally apply to its services, the MBTA is nonetheless taking strong actions to reduce transit operational noise within its control (refer to Sections II and IV of this FEIR).

1.7.A Existing Measurement Results

Table I.4 shows the measured day-night L_{dn} sound levels at each noise measurement location. Table I.4 shows that the L_1 ranged from about 75 dBA to 95 dBA at the measurement locations during periods when the Blue Line is operating. MBTA Blue Line trains exceed cited City and State standards.

The L_{90} -- background or steady state ambient noise level -- ranged from about 40 dBA to 55 dBA. Hourly L_{eq} , L_{90} and L_1 (maximum noise level) for each measurement location are contained in separate Appendix 5. Appendix 5 also contains the exceedence data reports for each monitoring location. The SEL data in these reports were used to calculate the relative contributions between aircraft and train noise.

Table I.3
Noise Standards And Regulations*
(Revised)

Agency	Land Use	Descriptor	Level
American National Standards Institute (ANSI)*	Residential	L_{dn}	65
City of Boston Zoning District Noise Standards*	Res., day	dBA	60
	Res., night	dBA	50
	Res./Ind., day	dBA	65
	Res./Ind., night	dBA	55
	Business, all times	dBA	65
	Industrial, all times	dBA	70
Comm. of Mass.*	All	Pure tone generation; increments in ambient noise levels of more than 10 dBA	

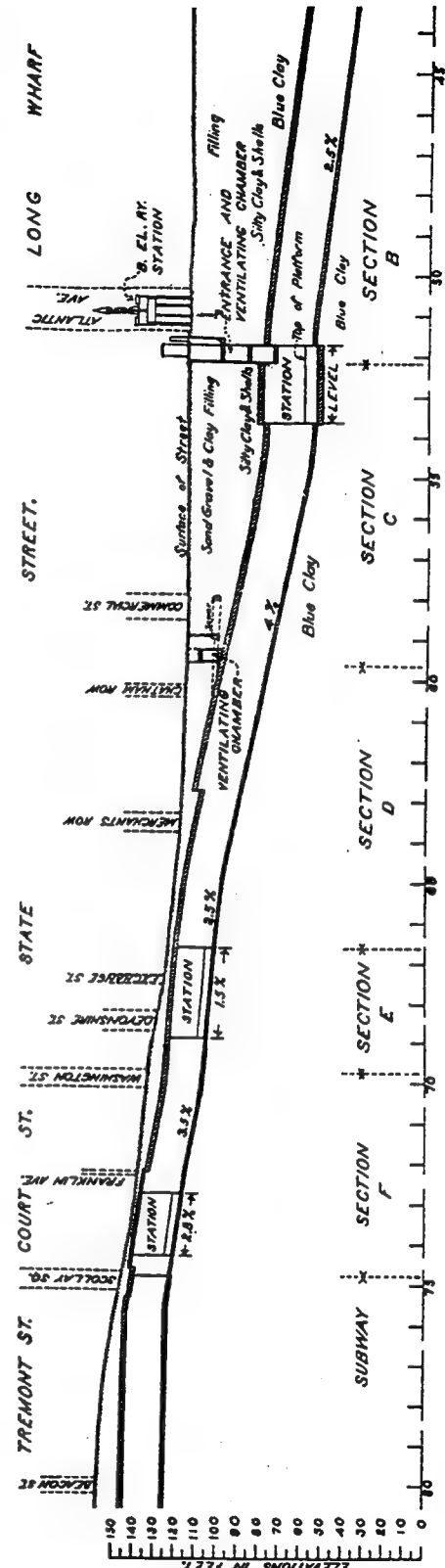
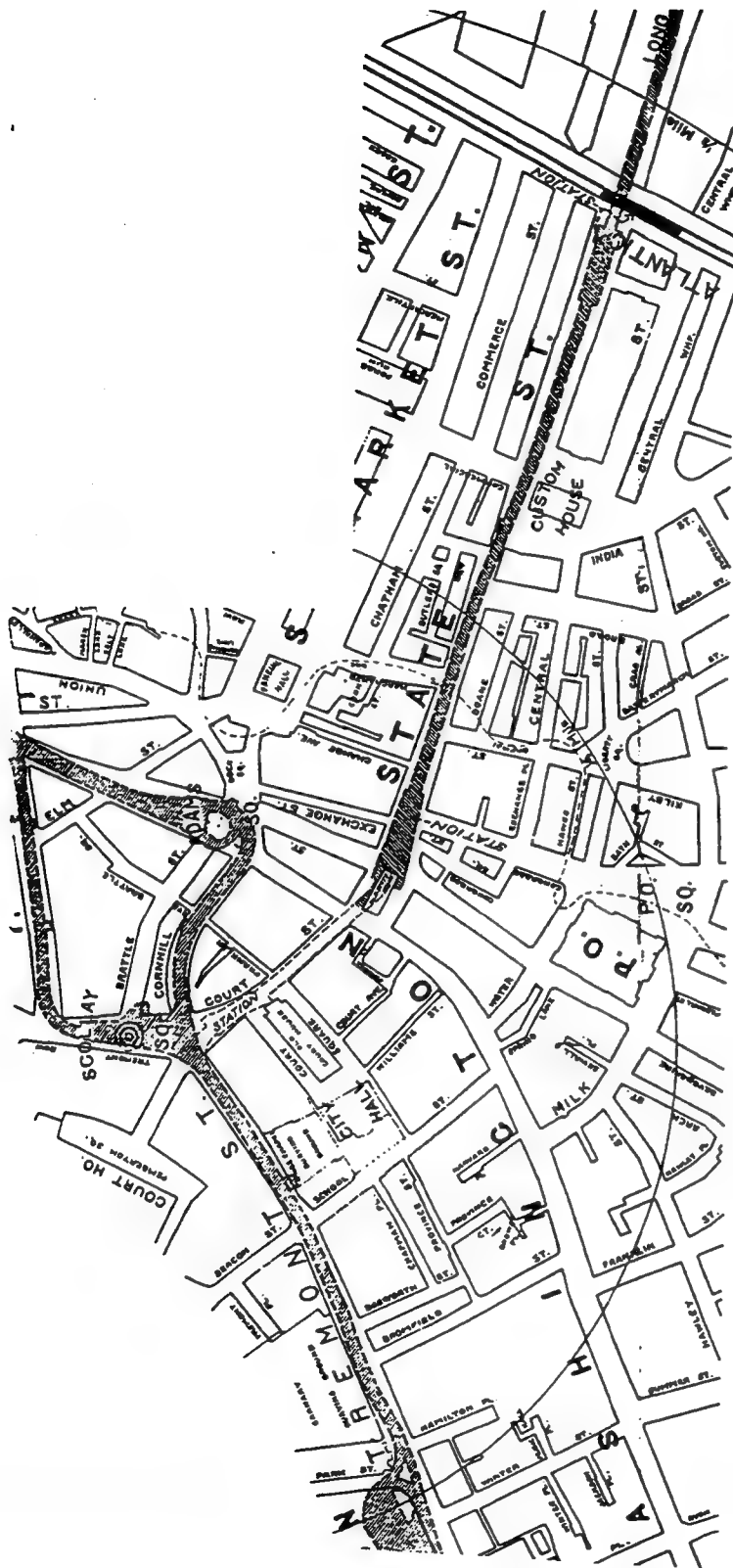
* Noise standards are presented for information purposes. It is unclear whether these standards legally apply to MBTA services.

Table 1.4

**Existing
Blue Line Noise Measurements***
(July, 1991)

<u>Location</u>	<u>Day-night Sound Level</u> (dBA L _{dn})
95 Cowper Street, East Boston	82
759 Bennington Street, East Boston	75
26 Barnes Avenue, East Boston	67
7 Walley Street, East Boston	79
14 Washburn Street, Revere	76
Waters Edge Condos Ocean Avenue, Revere	80

* Source: Acentech Corporation.



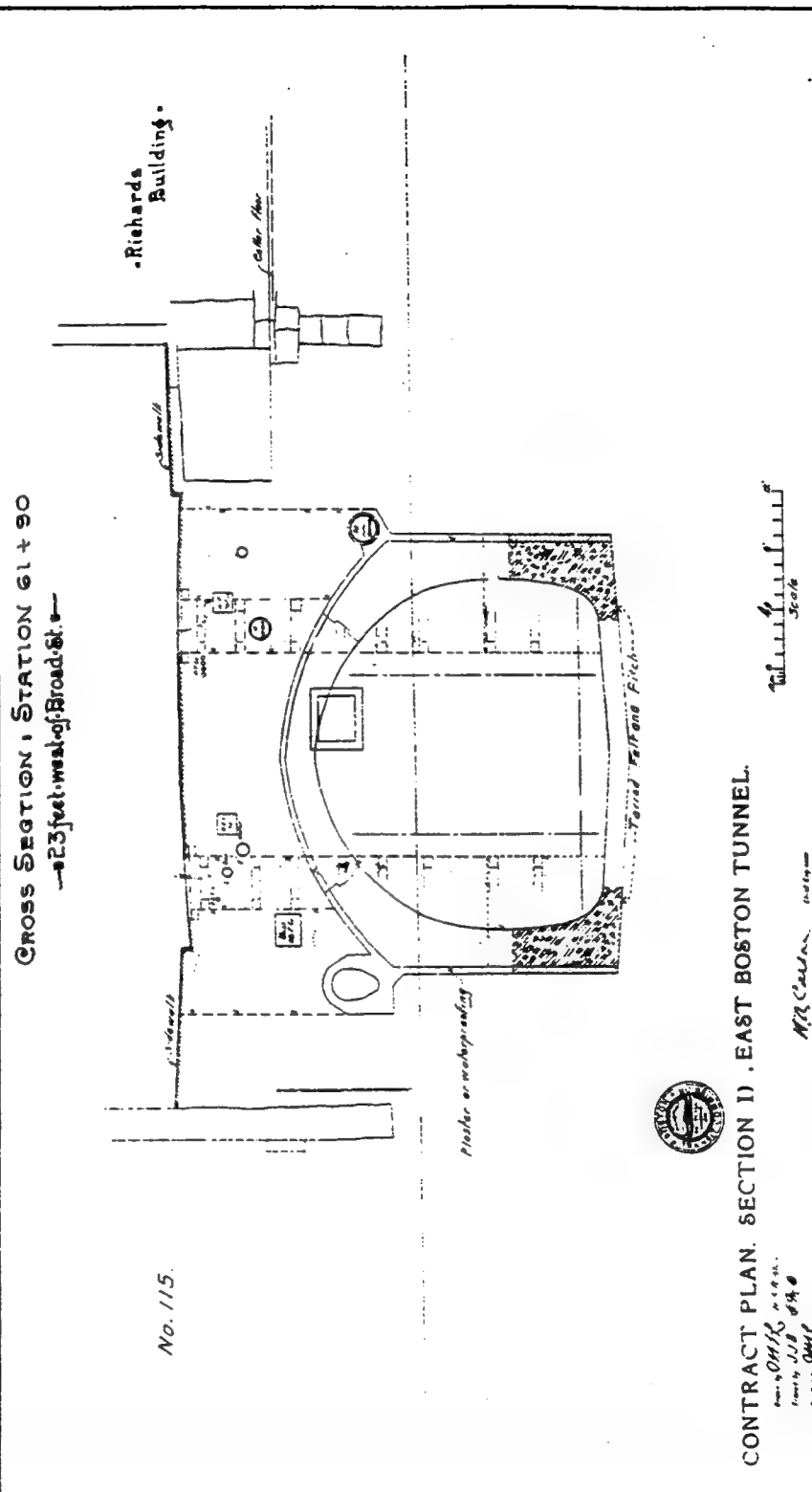
SOURCE:
Boston Transit Commission,
Annual Report, 1903.

EAST BOSTON TUNNEL PLAN AND PROFILE STATE STREET, 1903

① Massachusetts Bay Transportation Authority

Blue Line Station Modernization FEIR

Plate 12.



EAST BOSTON TUNNEL CROSS-SECTION WEST OF BROAD STREET

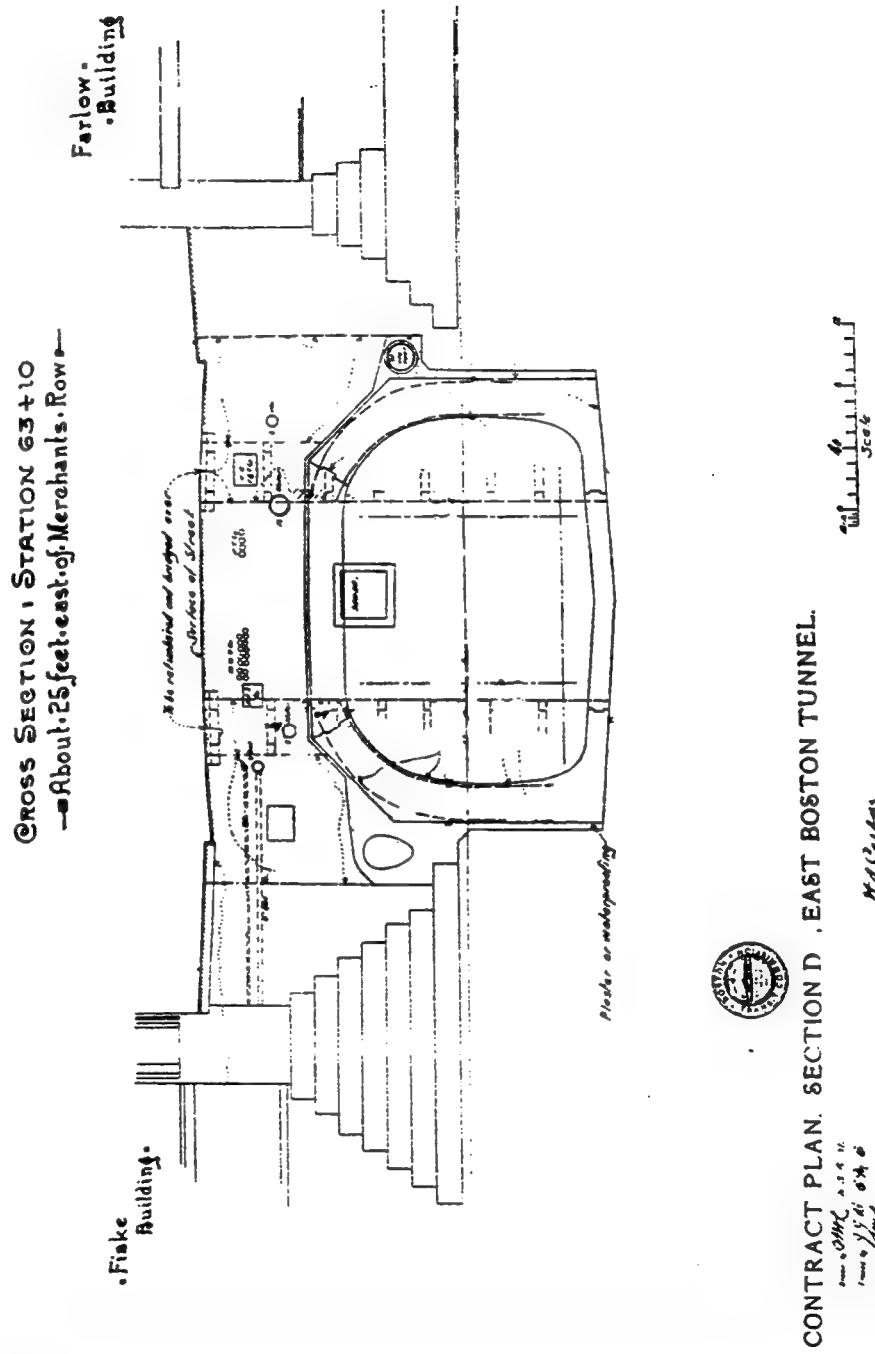
SOURCE:
 Boston Transit Commission,
 Annual Report, 1902.

Ⓜ Massachusetts Bay Transportation Authority

Blue Line Station Modernization FEIR

Figure I.17

Plate 13.

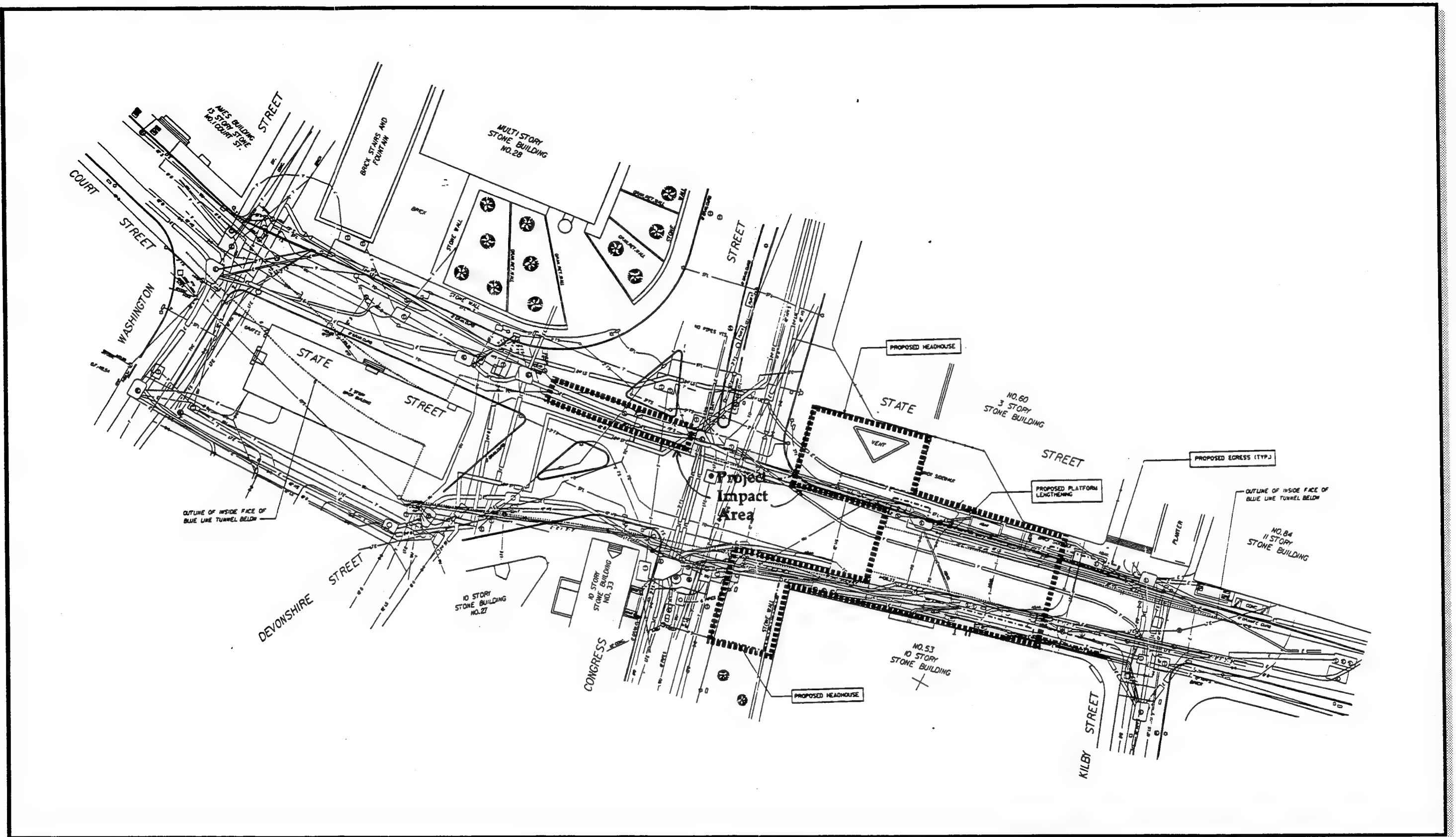


EAST BOSTON TUNNEL CROSS-SECTION EAST OF MERCHANTS ROW

SOURCE:
Boston Transit Commission,
Annual Report, 1902.

Ⓜ Massachusetts Bay Transportation Authority
Blue Line Station Modernization FEIR

Figure I.18



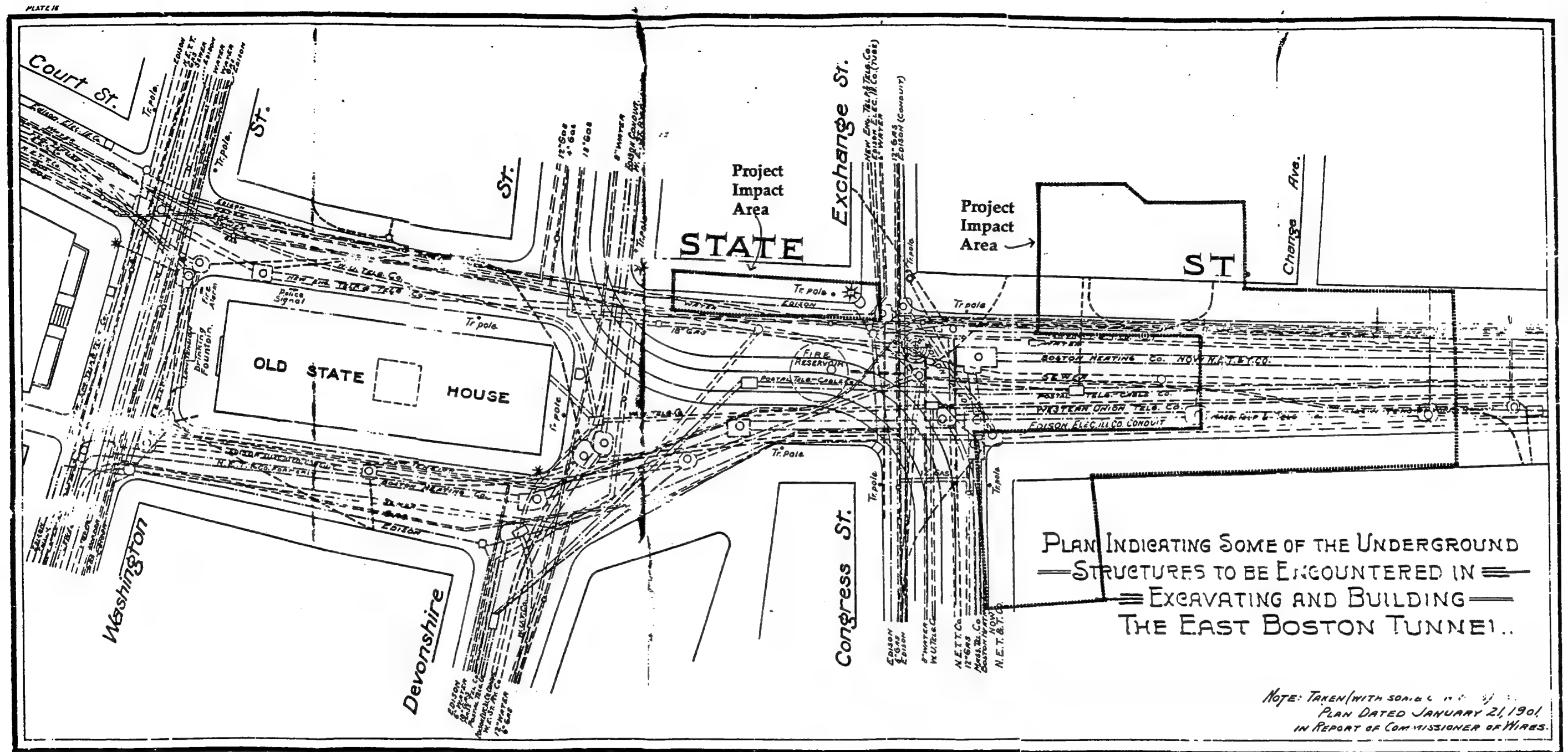
Approximate Scale: 1 in. = 50 ft.

Source:
Archaeological Reconnaissance Survey
 Boston Affiliates, Inc., July 1993.

STATE STATION EXISTING UTILITIES, 1989

Ⓘ Massachusetts Bay Transportation Authority
 Blue Line Station Modernization FEIR

Figure 1.20



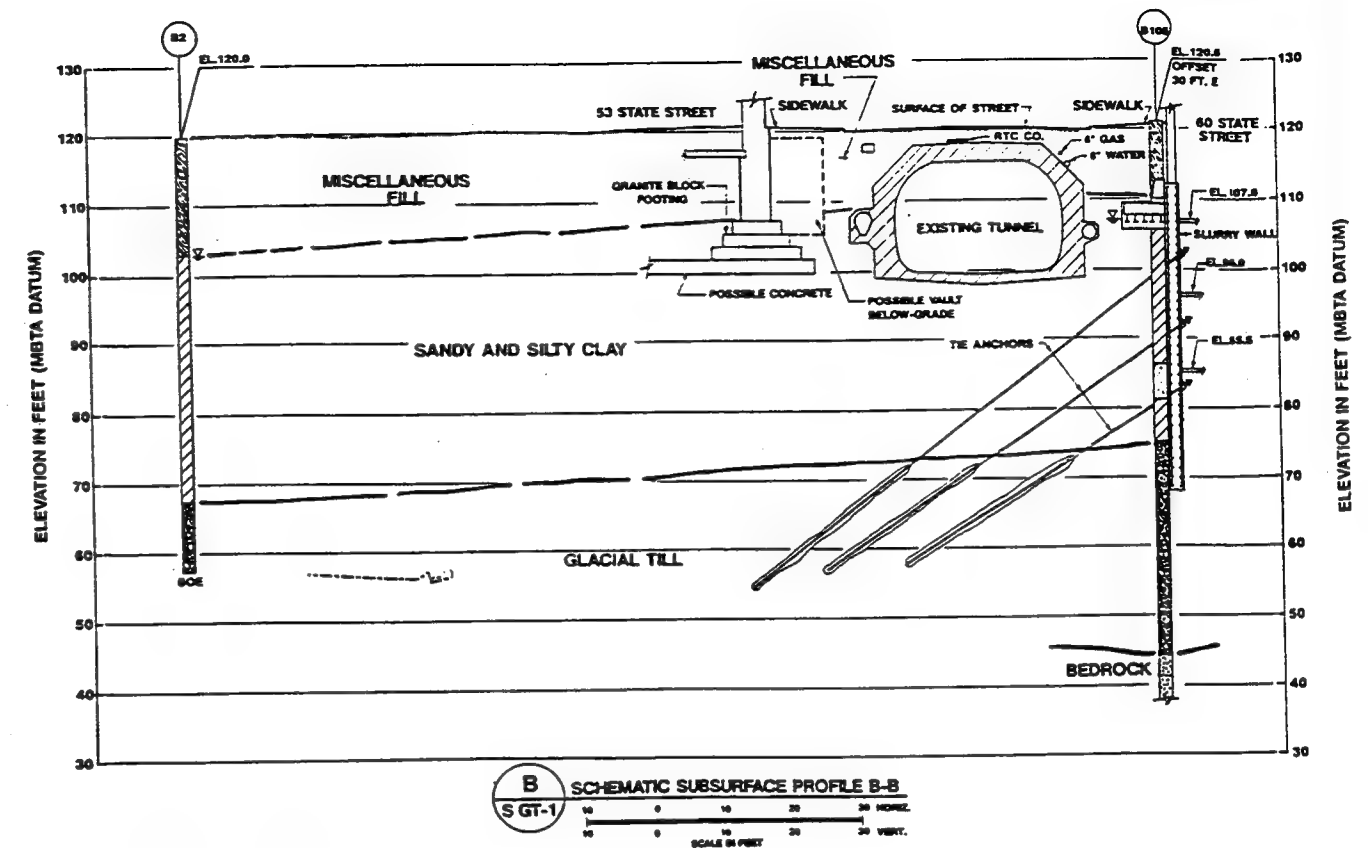
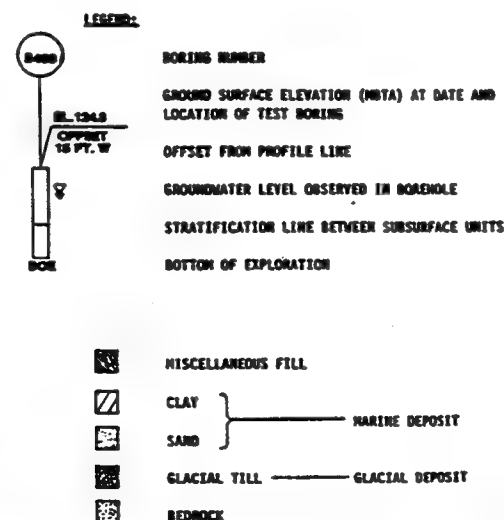
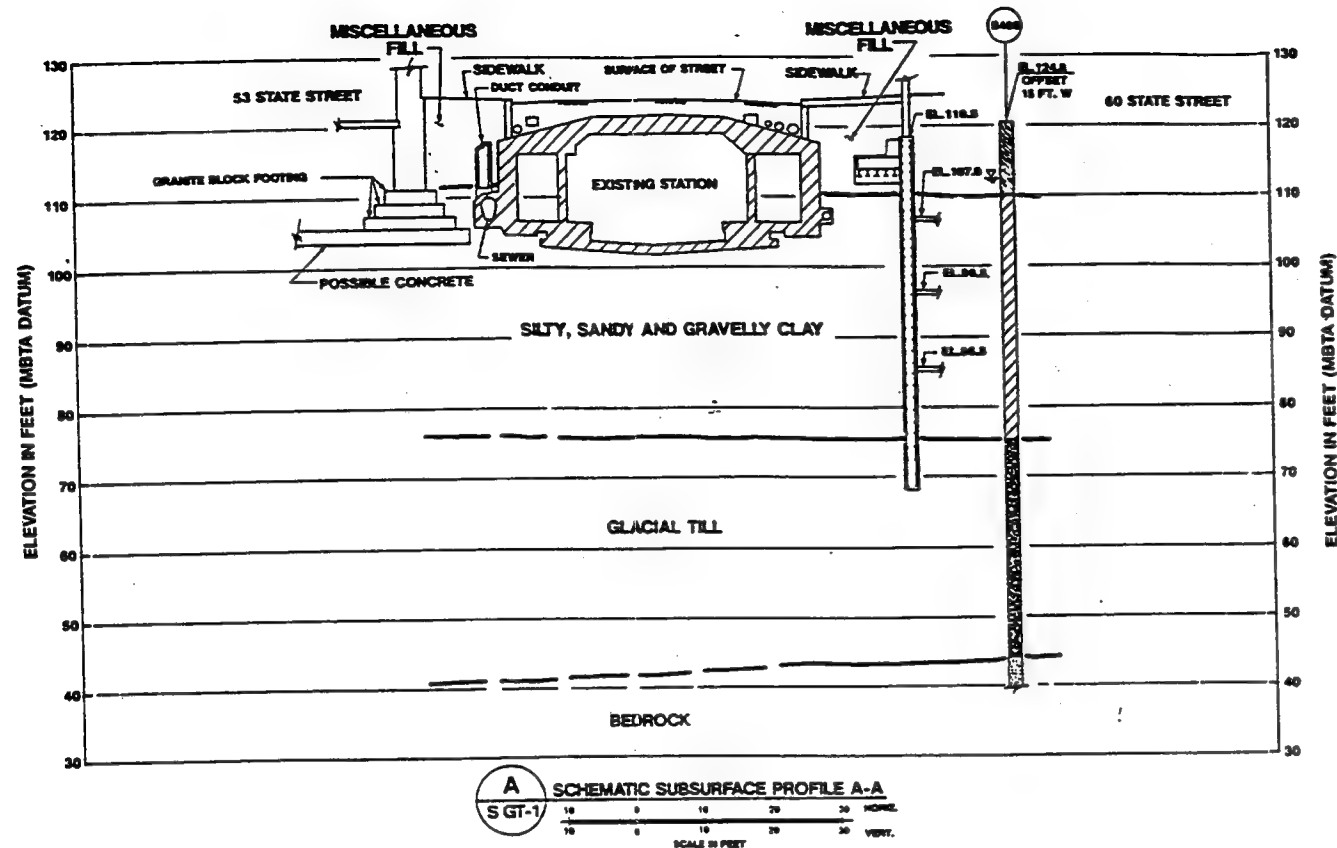
No Scale

Source:
Archaeological Reconnaissance Survey,
Boston Associates, Inc., July 1993.

STATE STATION SUBSURFACE UTILITIES, 1901

① Massachusetts Bay Transportation Authority
Blue Line Station Modernization FEIR

Figure I.21



- NOTES:**
1. REFER TO DRAWING S GT-1 FOR LOCATION AND ORIENTATION OF THE SUBSURFACE PROFILE SHOWN ON THIS DRAWING.
 2. LINES REPRESENTING CHANGES IN STRATA ARE BASED UPON INTERPOLATION BETWEEN SUBSURFACE EXPLORATIONS AND MAY NOT REPRESENT ACTUAL FIELD CONDITIONS AT OTHER THAN SPECIFIC EXPLORATION LOCATIONS.
 3. WATER LEVELS INDICATED ON THE PROFILES WERE MEASURED IN BORINGS UPON COMPLETION. IT SHOULD BE NOTED THAT FLUCTUATIONS IN GROUNDWATER LEVELS NORMALLY OCCUR DUE TO VARIATIONS IN PRECIPITATION, LEAKAGE OF SEWERS AND STORM DRAINS, TEMPERATURE, SEASON, ADJACENT CONSTRUCTION ACTIVITY, AND PUMPING OF CONSTRUCTION Dewatering SYSTEMS.
 4. ELEVATIONS REFER TO MASSACHUSETTS BAY TRANSPORTATION AUTHORITY (MBTA) DATUM WHICH IS 105.65 FT. BELOW NATIONAL GEODETIC VERTICAL DATUM (NGVD) AND 100.0 FT. BELOW BOSTON CITY BASE (BCB) DATUM.

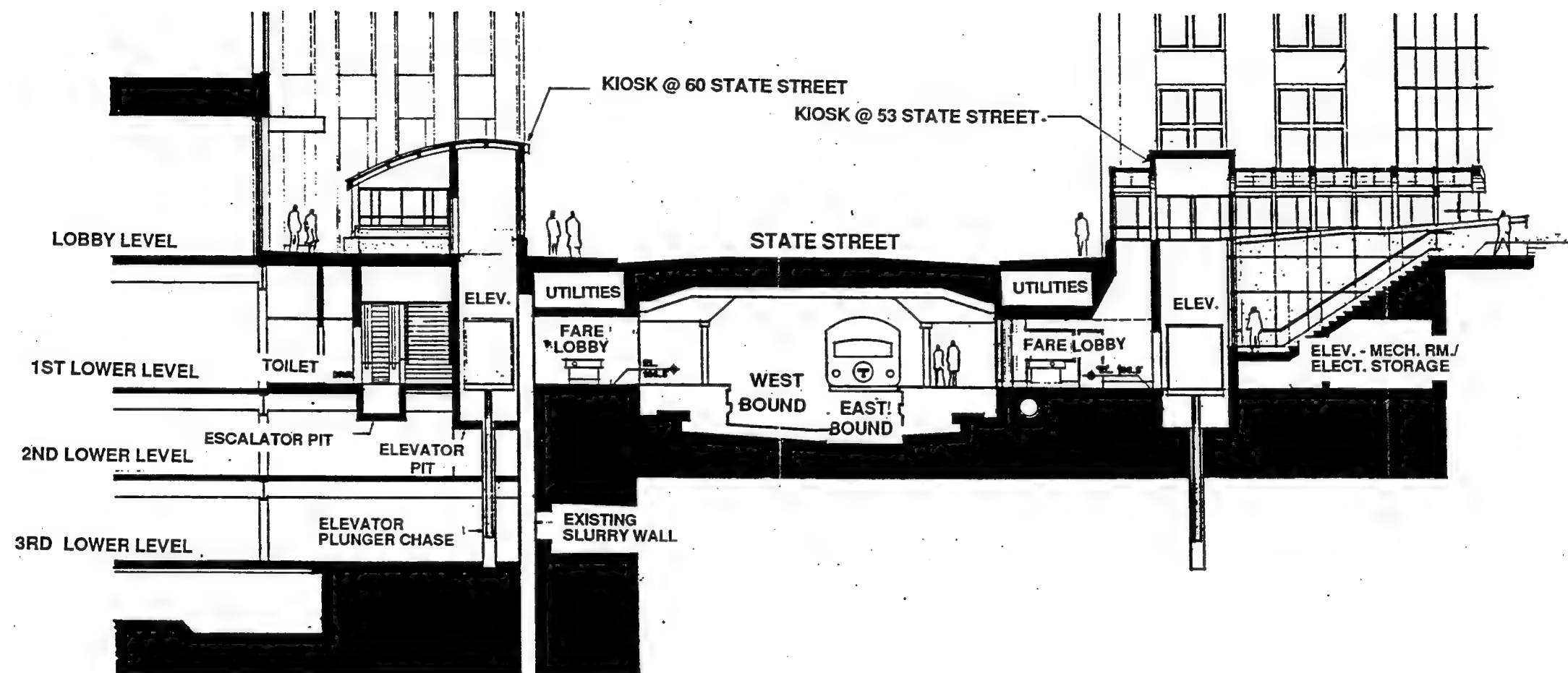
No Scale

Source:
Schematic Design Report, CPF/Domenech & Hicks, Inc./
Weidlinger Associates, Inc., November 1989.

STATE STATION SCHEMATIC SUBSURFACE PROFILE

Massachusetts Bay Transportation Authority
Blue Line Station Modernization FEIR

Figure I.22



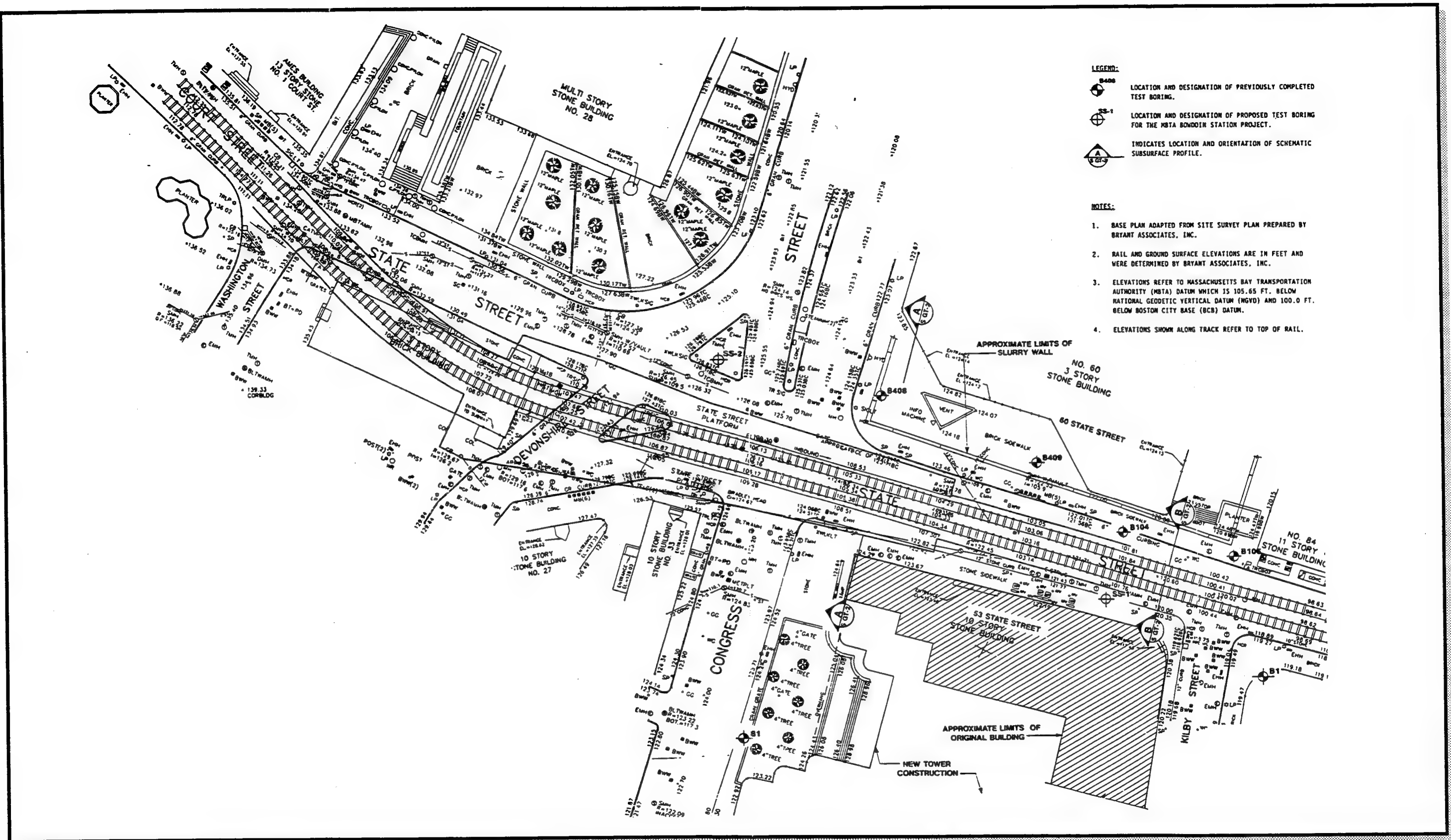
Approximate Scale: 1 in. = 23 ft.

Source:
 Schematic Design Report, CPF/Domenech & Hicks, Inc./
 Weidinger Associates, Inc., November 1989.

STATE STATION **PROPOSED BLUE LINE ENTRANCES -** **LONGITUDINAL SECTION**

Ⓜ Massachusetts Bay Transportation Authority
 Blue Line Station Modernization FEIR

Figure 1.23



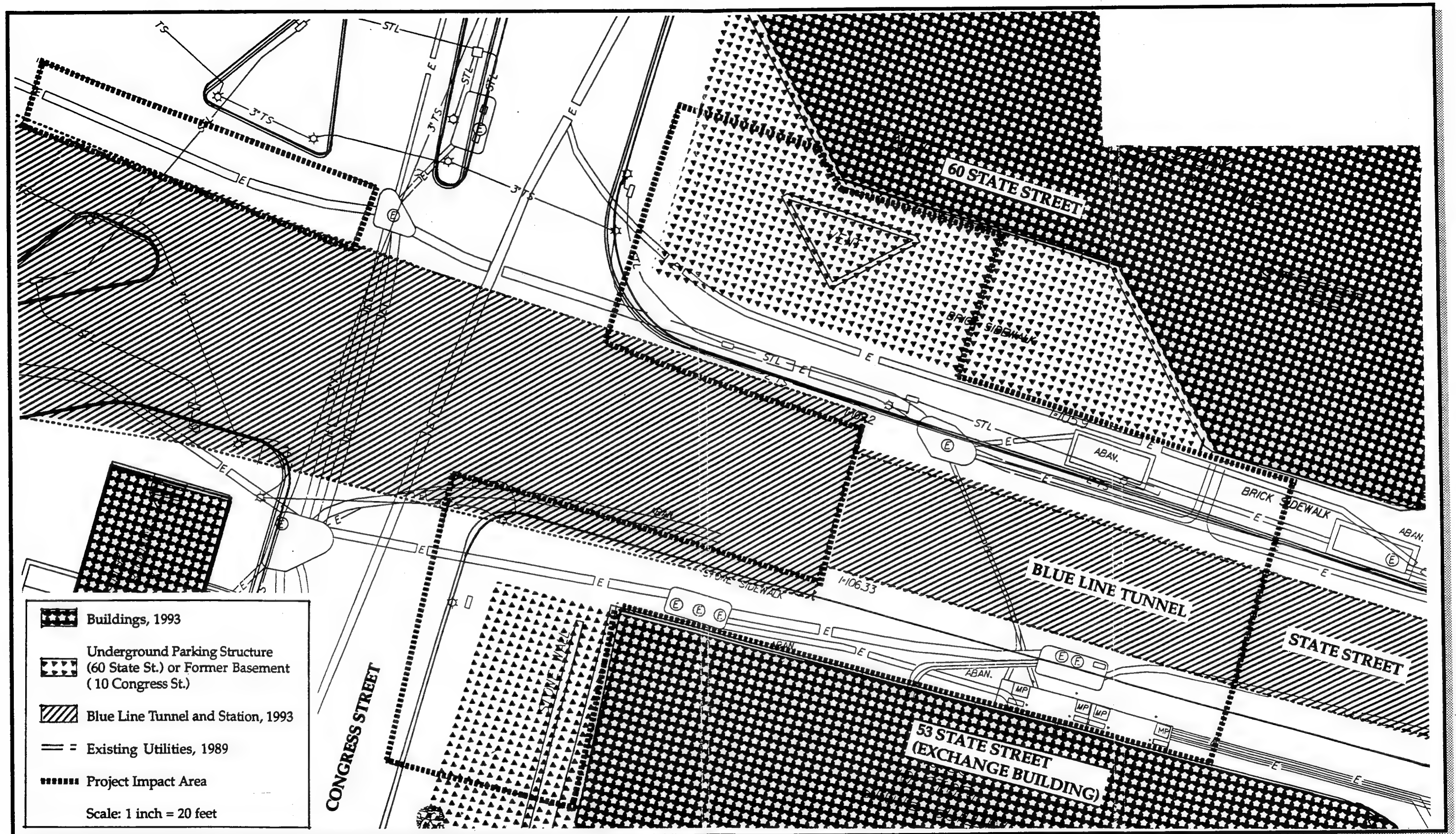
Approximate Scale: 1 in. = 50 ft.

Source:
Schematic Design Report, CPF/Domenech & Hicks, Inc./
Weidinger Associates, Inc., November 1989.

STATE STATION SUBSURFACE EXPLORATION PLAN

Ⓜ Massachusetts Bay Transportation Authority
Blue Line Station Modernization FEIR

Figure I.24



Approximate Scale: 1 in. = 20 ft.

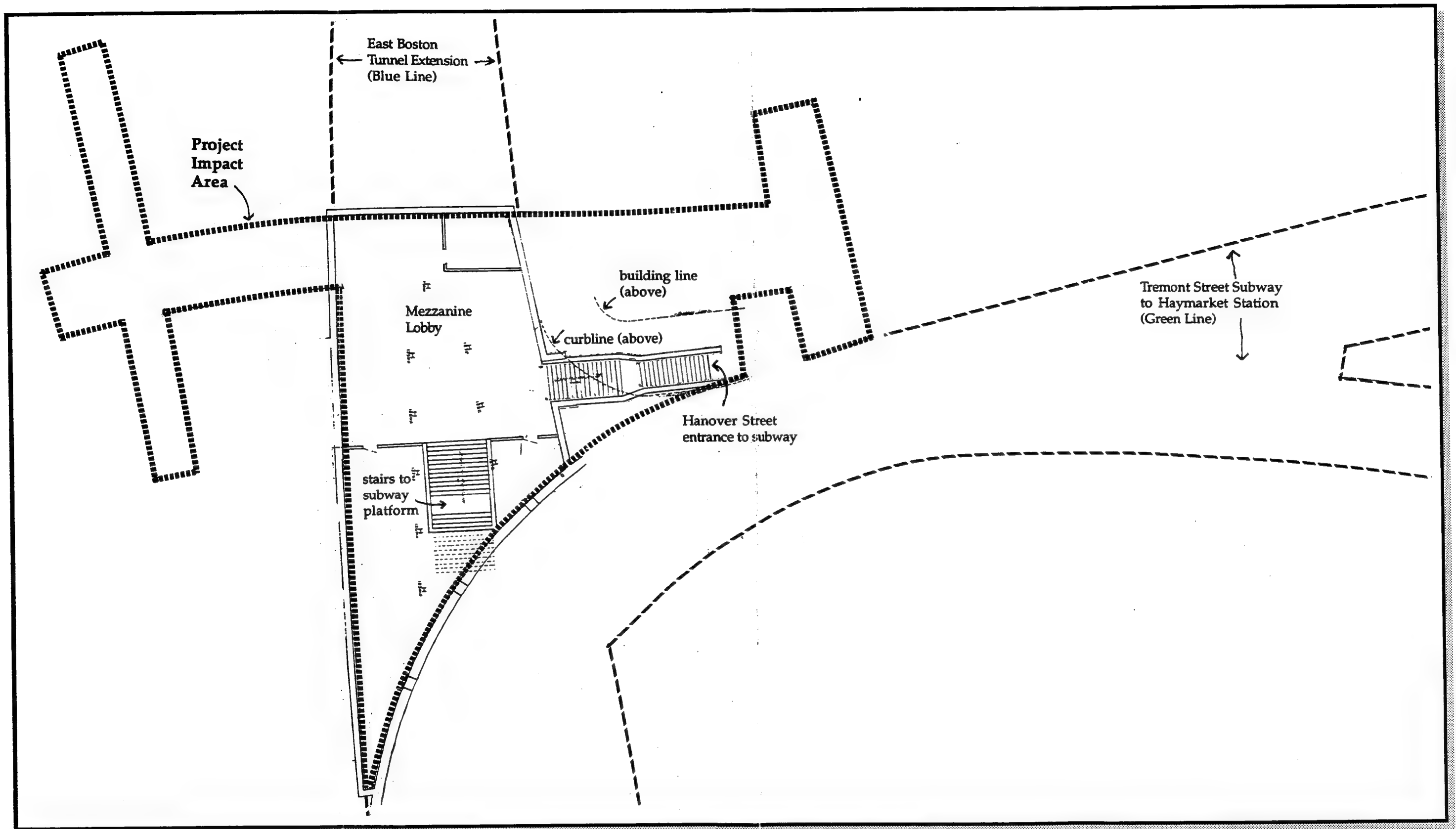
Source:
 Archaeological Reconnaissance Survey.
 Boston Affiliates, Inc., July 1993.

STATE STATION COMPILATION OF DISTURBANCES

Ⓜ Massachusetts Bay Transportation Authority

Blue Line Station Modernization FEIR

Figure 1.25



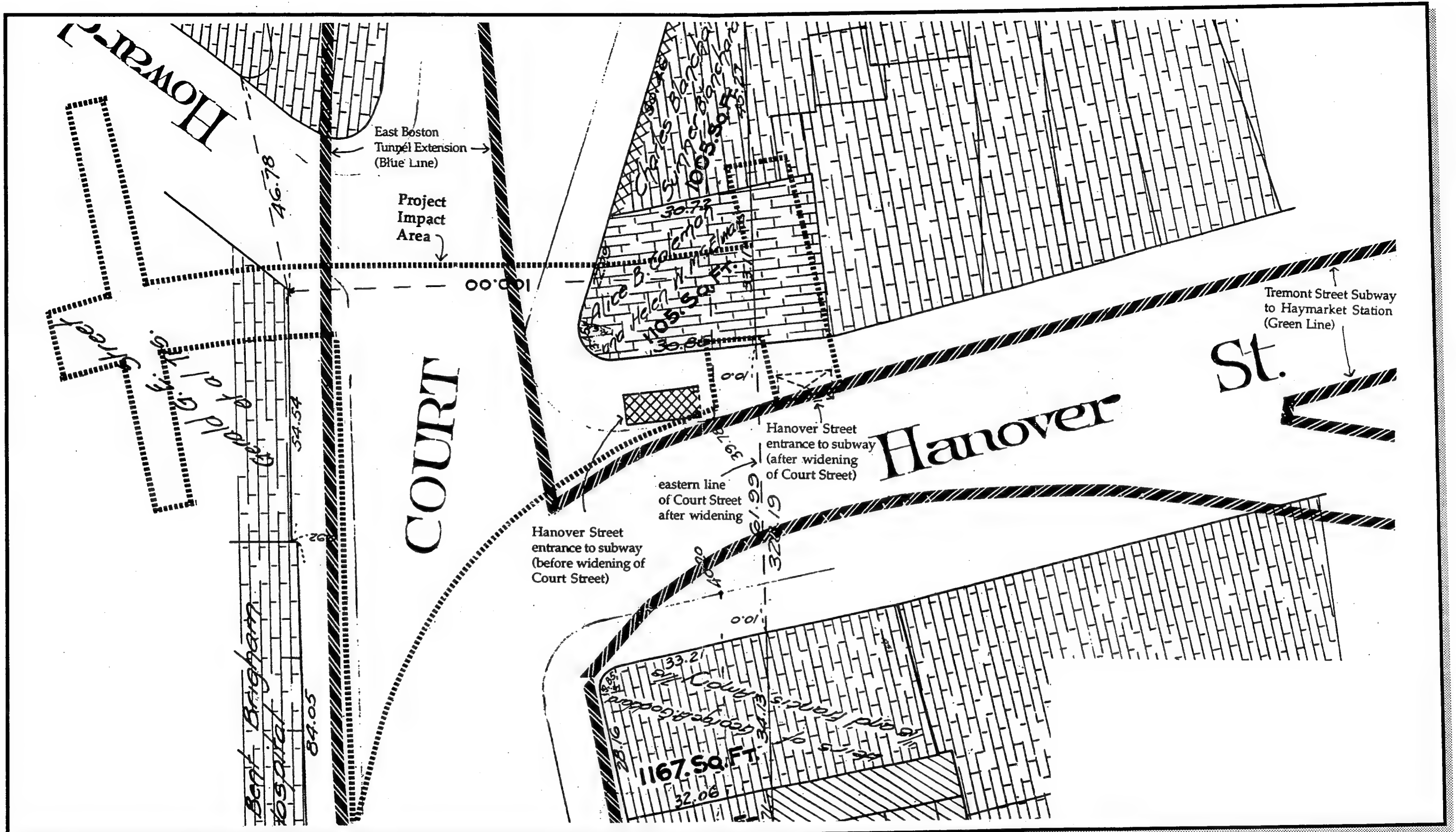
Approximate Scale: 1 in. = 20 ft.

Source:
Archaeological Reconnaissance Survey.
 Boston Affiliates, Inc., July 1993.

**GOVERNMENT CENTER STATION
 MEZZANINE LOBBY LEVEL - FORMER
 SCOLLAY SQUARE UNDER STATION**

Ⓜ Massachusetts Bay Transportation Authority
 Blue Line Station Modernization FEIR

Figure 1.26



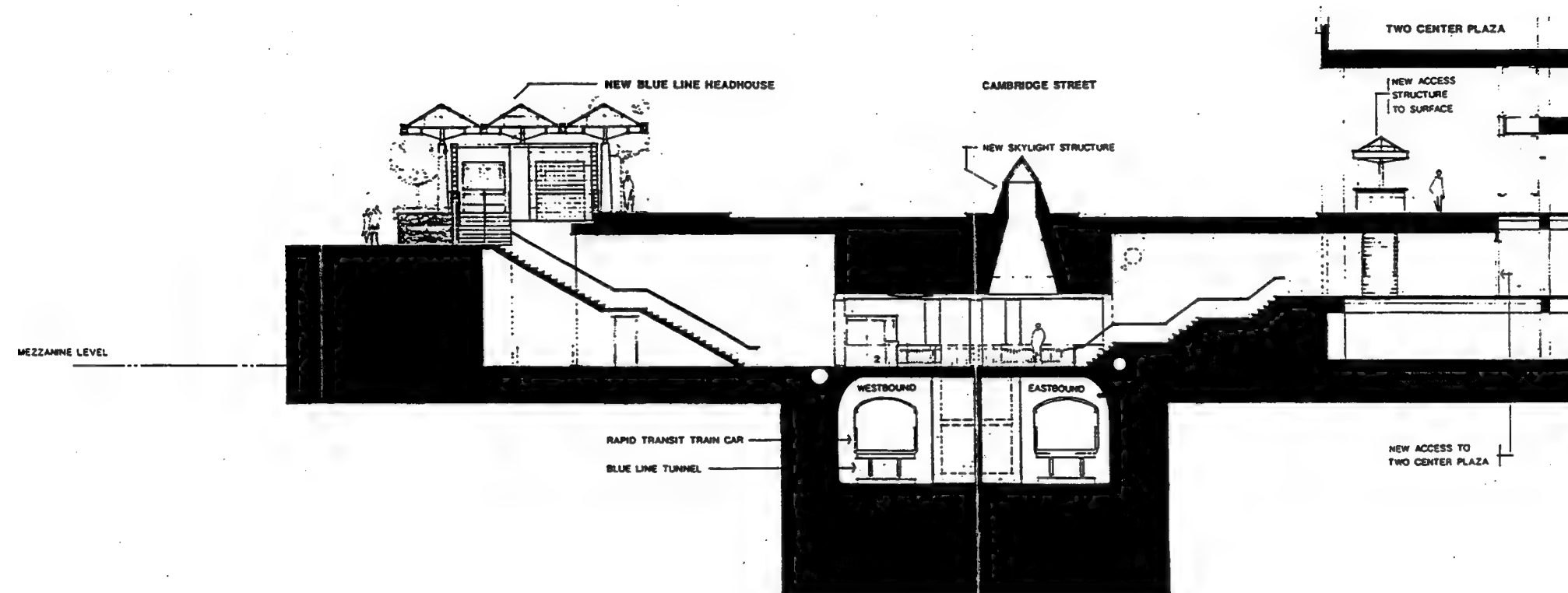
Approximate Scale: 1 in. = 20 ft.

Source:
Archaeological Reconnaissance Survey
Boston Affiliates, Inc., July 1993.

GOVERNMENT CENTER STATION COURT/HANOVER STREETS - c.1925

Ⓜ Massachusetts Bay Transportation Authority
Blue Line Station Modernization FEIR

Figure 1.27



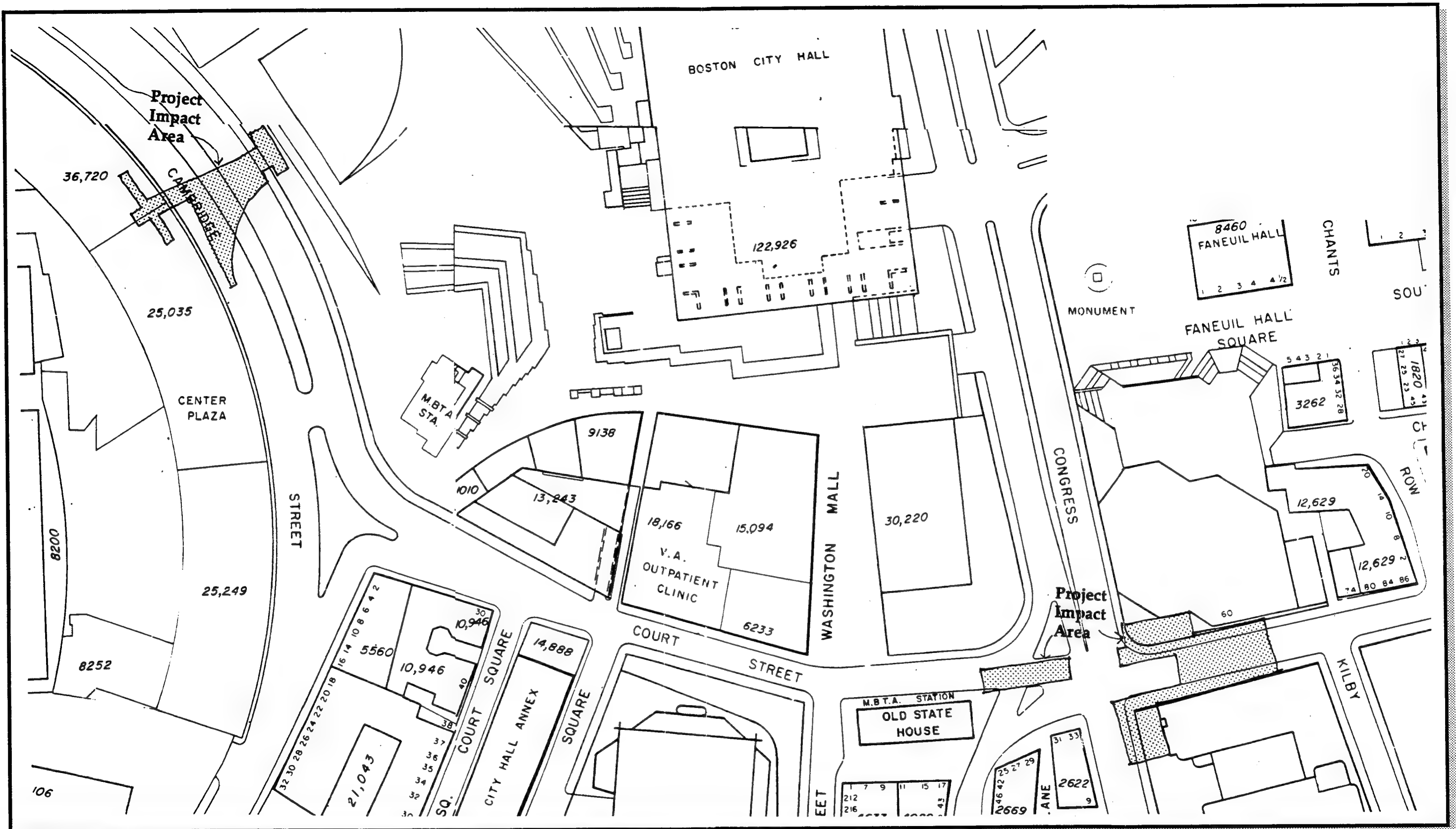
GOVERNMENT CENTER STATION PROPOSED CROSS-SECTION

No Scale

Source:
Schematic Design Report, CPF/Domenech & Hicks, Inc./
 Weidinger Associates, Inc., November 1989.

Ⓜ Massachusetts Bay Transportation Authority
 Blue Line Station Modernization FEIR

Figure 1.28



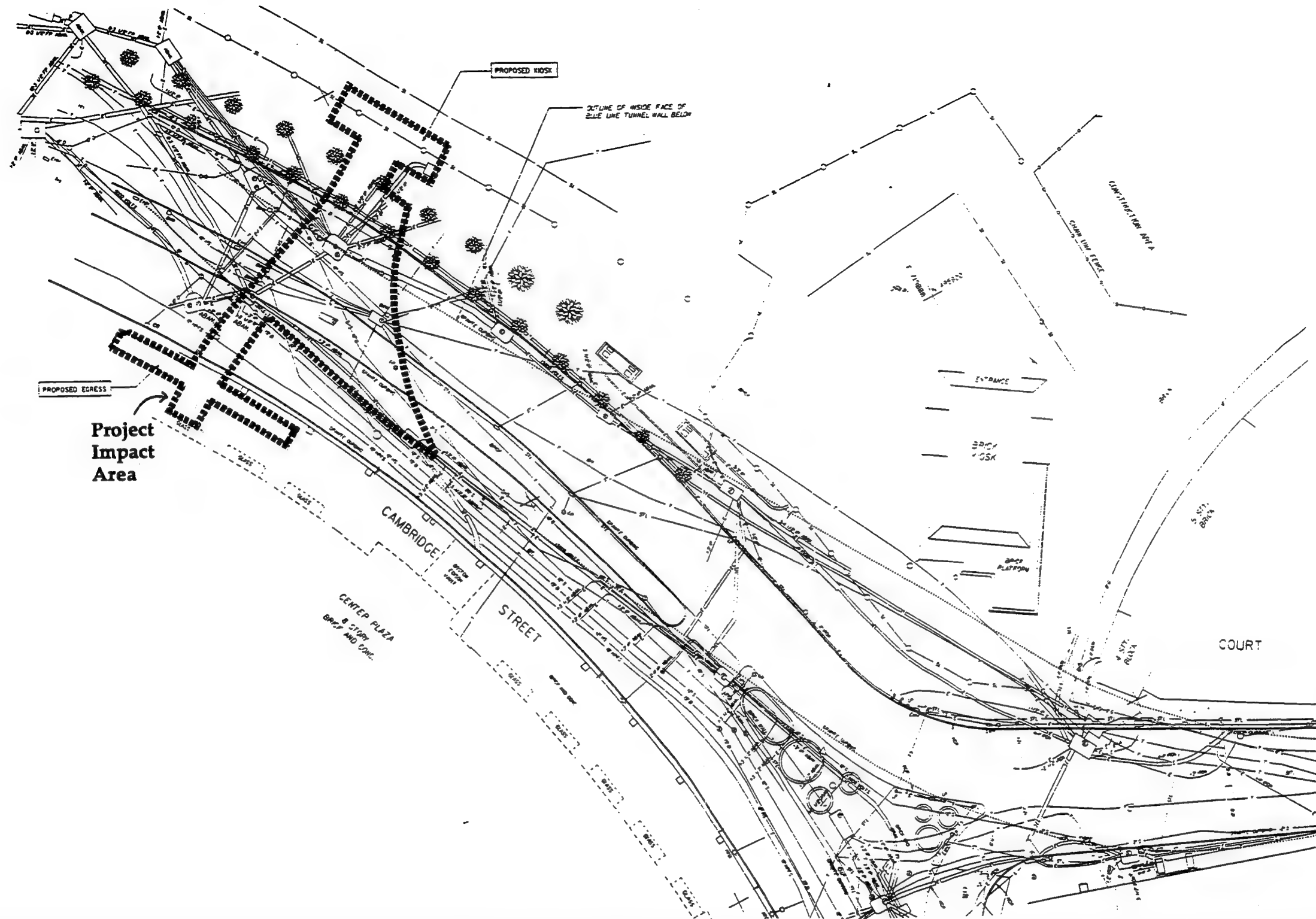
Approximate Scale: 1 in. = 100 ft.

Source:
Archaeological Reconnaissance Survey.
 Boston Affiliates, Inc., July 1993.

GOVERNMENT CENTER STATION AND STATE STATION - ARCHAEOLOGICAL IMPACT AREAS

Ⓜ Massachusetts Bay Transportation Authority
 Blue Line Station Modernization FEIR

Figure I.29



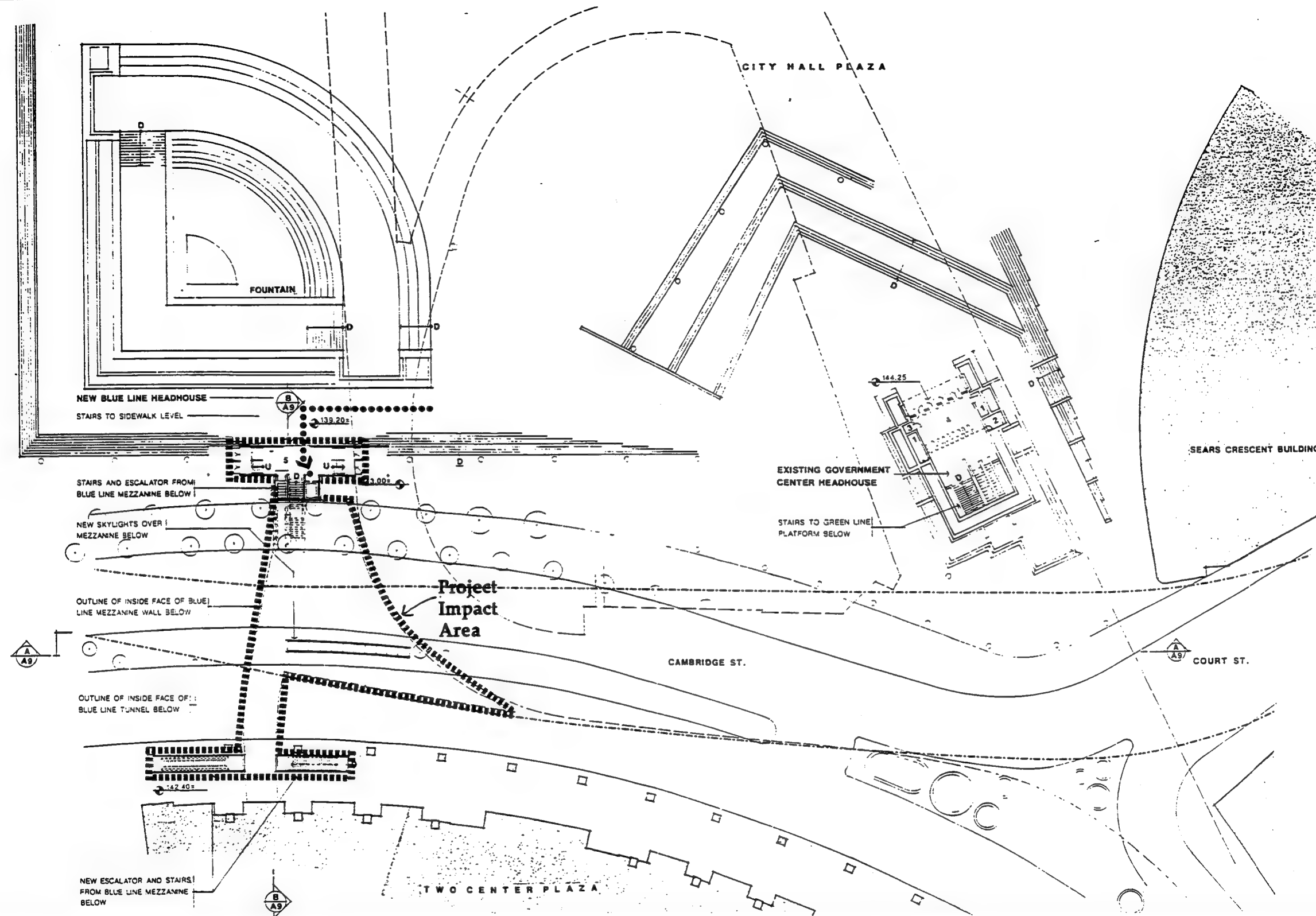
Approximate Scale: 1 in. = 50 ft.

Source:
Archaeological Reconnaissance Survey,
Boston Affiliates, Inc., July 1993.

GOVERNMENT CENTER STATION EXISTING UTILITIES, 1989

Ⓜ Massachusetts Bay Transportation Authority
Blue Line Station Modernization FEIR

Figure I.30



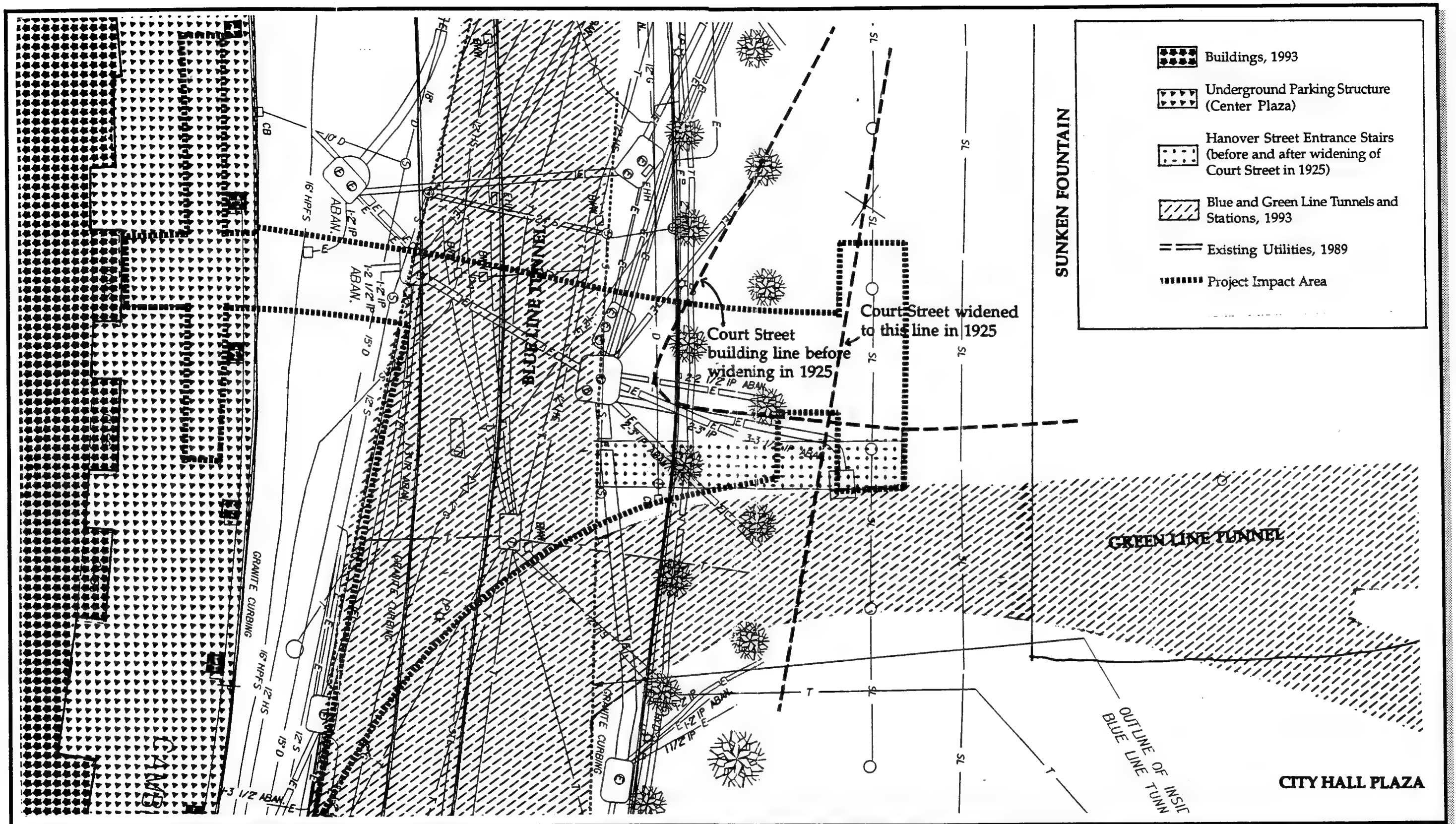
Approximate Scale: 1 in. = 50 ft.

Source:
Archaeological Reconnaissance Survey
 Boston Affiliates, Inc., July 1993.

GOVERNMENT CENTER STATION **PROPOSED NEW HEADHOUSE LOCATIONS** **AND PROJECT IMPACT AREAS**

T Massachusetts Bay Transportation Authority
 Blue Line Station Modernization FEIR

Figure 1.31



Approximate Scale: 1 in. = 20 ft.

Source:
Archaeological Reconnaissance Survey,
Boston Associates, Inc., July 1993.

GOVERNMENT CENTER STATION COMPILATION OF DISTURBANCES

Ⓜ Massachusetts Bay Transportation Authority
Blue Line Station Modernization FEIR

Figure I.32

Section II
ENVIRONMENTAL IMPACTS



II. ENVIRONMENTAL IMPACTS

II.1 DOWNTOWN BLUE LINE STATION PEDESTRIAN FLOW IMPACTS (REVISION FROM DEIR)

Commenting on the DEIR, various City of Boston agencies expressed concern about:

- 1) The siting and design of proposed new headhouses; and
- 2) The analysis of pedestrian and vehicle circulation activities and operations at Blue Line stations in Downtown Boston both during and after construction.

II.1.A Overview of Downtown Station Headhouses Siting and Design Issues

Comments regarding the siting and design of downtown Boston headhouses at State and Government Center were raised by the following City of Boston agencies:

- ✓ Public Facilities Department (PFD) April 5, 1993
- ✓ Boston Water and Sewer Commission (BWSC) April 7, 1993
- ✓ Boston Redevelopment Authority (BRA) April 13, 1993
- ✓ The Boston Environment Department April 7, 1993
- ✓ Boston Transportation Department (BTD) April 20, 1993
- ✓ Boston Real Property Department April 28, 1993

Although not apparent from the comments from these agencies, the MBTA and its station architects, the Blue

Line Consultants Joint Venture (Domenech Hicks & Krockmalnic, Inc. Architects and Weidinger Associates, Inc., Consulting Engineers) have held a series of meetings with City of Boston agencies since the inception of the Blue Line Modernization Program for the downtown Boston Stations.

Additionally, the Joint Venture team prepared a *State, Government Center and Bowdoin Stations Schematic Design Report - Volumes I-IV* (November, 1989). Following publication of the *Schematic Design Report*, several meetings were held to discuss the proposed improvements and coordinate with these agencies as well as the Boston Landmarks Commission and the Massachusetts Historical Commission, as outlined in the following chronology:

- ✓ November 2, 1989 meeting with the BRA and other City of Boston agencies to present schematic design alternative solutions from the Blue Line downtown Boston stations *Schematic Design Report*.
- ✓ June 12, 1991 meeting with the BRA to present proposed schemes including the closure of Bowdoin Station.
- ✓ January 31, 1992 meeting with the Massachusetts Historical Commission (MHC) and Boston Landmarks Commission (BLC) to discuss issues associated with proposed State Station schemes and station kiosks.
- ✓ March 12, 1992 meeting with the MHC and BLC to present revised 53 State Street headhouse designs including drawings and photographs of models.
- ✓ April 22, 1992 meeting with the Boston PFD to present the MBTA's

Government Center station scheme and headhouse designs.

- ✓ July 16, 1992 meeting with the MHC and the BRA to review State station kiosk design alternatives. At this meeting, the station architects were asked to study reduced roof coverage possibilities.

Subsequent to the above meetings, following publication of the DEIR, the MBTA met with various City agencies on three separate occasions -- July 31, August 17, and September 8, 1993 -- to address City comments on the DEIR.

Although the majority of site and design issues raised by City of Boston comments on the DEIR were concerned about above ground issues, proposed headhouse locations at State and Government Center station were selected to reflect a balance between above ground restrictions, restrictions imposed by the complex underground infrastructure, MBTA program and financial constraints, and direct concerns of affected building owners.

Design work on the Bowdoin, Government Center, State, Orient Heights, and Maverick stations has been suspended pending approval of this FEIR. While design coordination efforts are continuing between the MBTA and affected agencies and public/private interests (e.g., utility companies), actual design work on these stations will resume once this FEIR has been approved.

II.1.B Overview of Downtown Stations Utilities and Infrastructure Impacts

In addition to the meetings listed above, the subconsultant to the Blue Line Consultants Joint Venture, Camp Dresser & McKee has met on a continuing basis with the Boston Water and Sewer Commission (BWSC) and all other potentially affected utility companies to ascertain existing utility conditions and

impacts that work on downtown stations will create. The DEIR provides a summary of utility impacts without detailed utility maps for the Government Center and State stations to ease public readability of the document. Detailed existing utility maps were prepared prior to the publication of the DEIR and are available for review. All utility companies and entities, public and private, have been informed of proposed station developments which may affect their utilities. Proposed designs have been adjusted to reflect concerns identified by affected utility companies.

The *Schematic Design Report* addresses utility impacts of the selected Government Center and State station headhouse schemes in detail. Since the publication of the *Schematic Design Report*, the Government Center station design has not been advanced to any significant degree, as the improvements are not scheduled for construction until late, 1997. Once design resumes on the proposed Government Center station improvements, coordination with affected utilities will continue.

While work on it has been suspended while the environmental impact review continues, the State station design has advanced to the 30% design phase. All required utility work is being coordinated with representatives of affected utilities to identify requirements needed to maintain full service of all utilities in the area during construction and to ensure that utilities requiring replacement or relocation are fully addressed. Refer to Section IV.1.I for a description of the MBTA's commitment to continue close coordination with all affected utilities during the design phase and to ensure the maintenance of utilities during construction.

II.1.C Government Center Station Siting and Design Issues

During the *Schematic Design Report* phase, two alternative treatments of the Government Center station were evaluated in great detail (See Figure II.1). With the MBTA's preferred station siting plan identified in the DEIR, the proposed new Blue Line headhouses on both sides of Cambridge Street are located approximately at the northerly end of the existing station platform structure.

The inbound and outbound tracks converge to the north of the platform and diverge again as they approach the Bowdoin Station center loading platform area.

The preferred Government Center headhouse plan uses the abandoned Scollay Square Under/Hanover Street egress mezzanine (now covered with bricks) on the City Hall Plaza side of Cambridge Street and minimizes the amount of required excavation (and hence utility disruptions) as well as the underground distances pedestrians must walk to access the Blue Line platform.

Architectural designs for the two proposed new Government Center headhouses are currently in the design development phase. Very little work has been done on the design of these headhouses since the publication of the *Schematic Design Report*.

When design development continues on the downtown Boston stations of the Blue Line Station Modernization Project, updated Government Center headhouse designs will be presented to all affected City of Boston agencies for further review and recommendations.

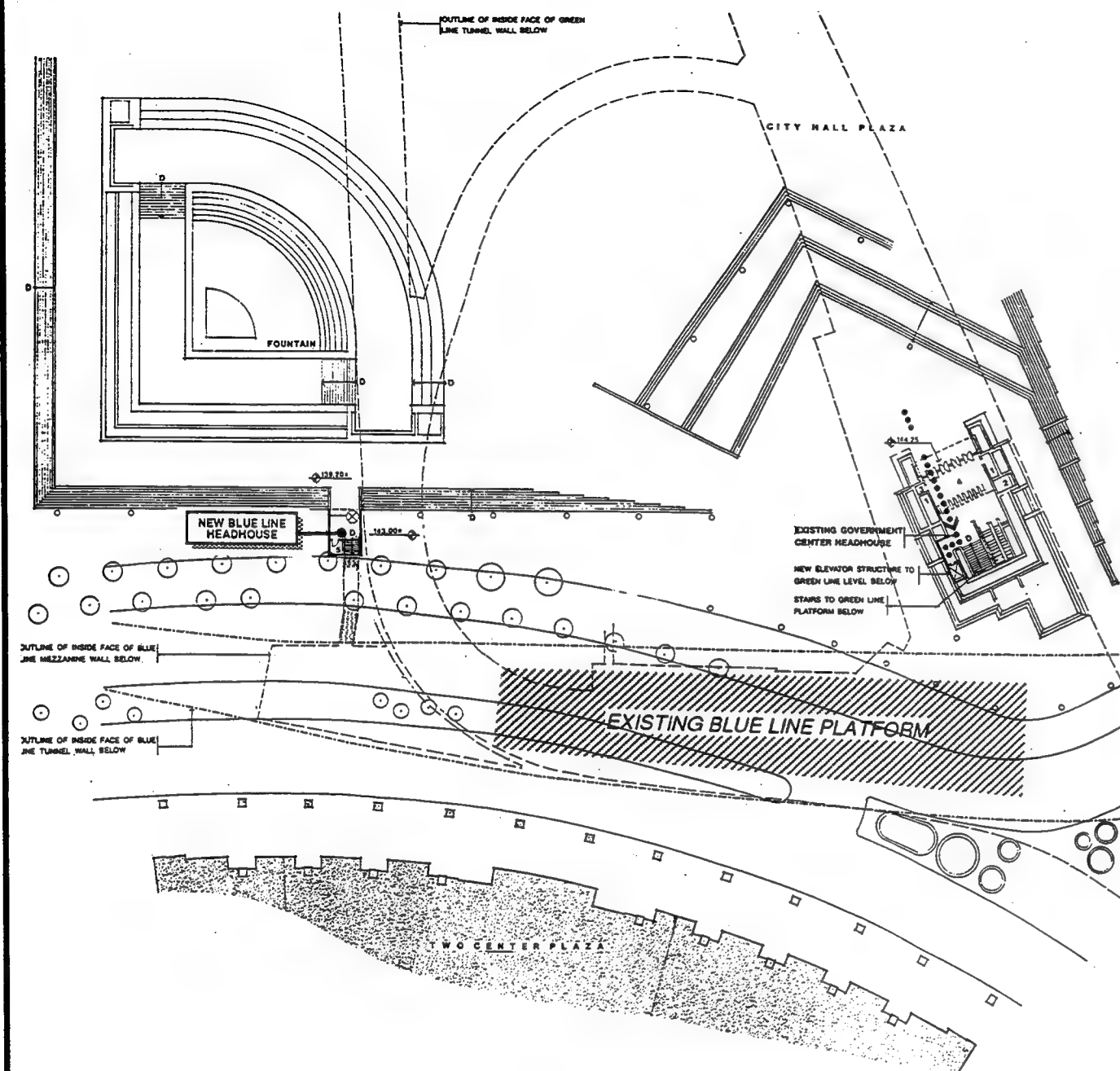
As currently planned, however, the two new Government Center headhouses will be staffed with one collector at the mezzanine level fare line, and a concession stand will be provided. The

two new entrances will be part of an overall Green and Blue Line station complex with shared operations, maintenance, and security staff.

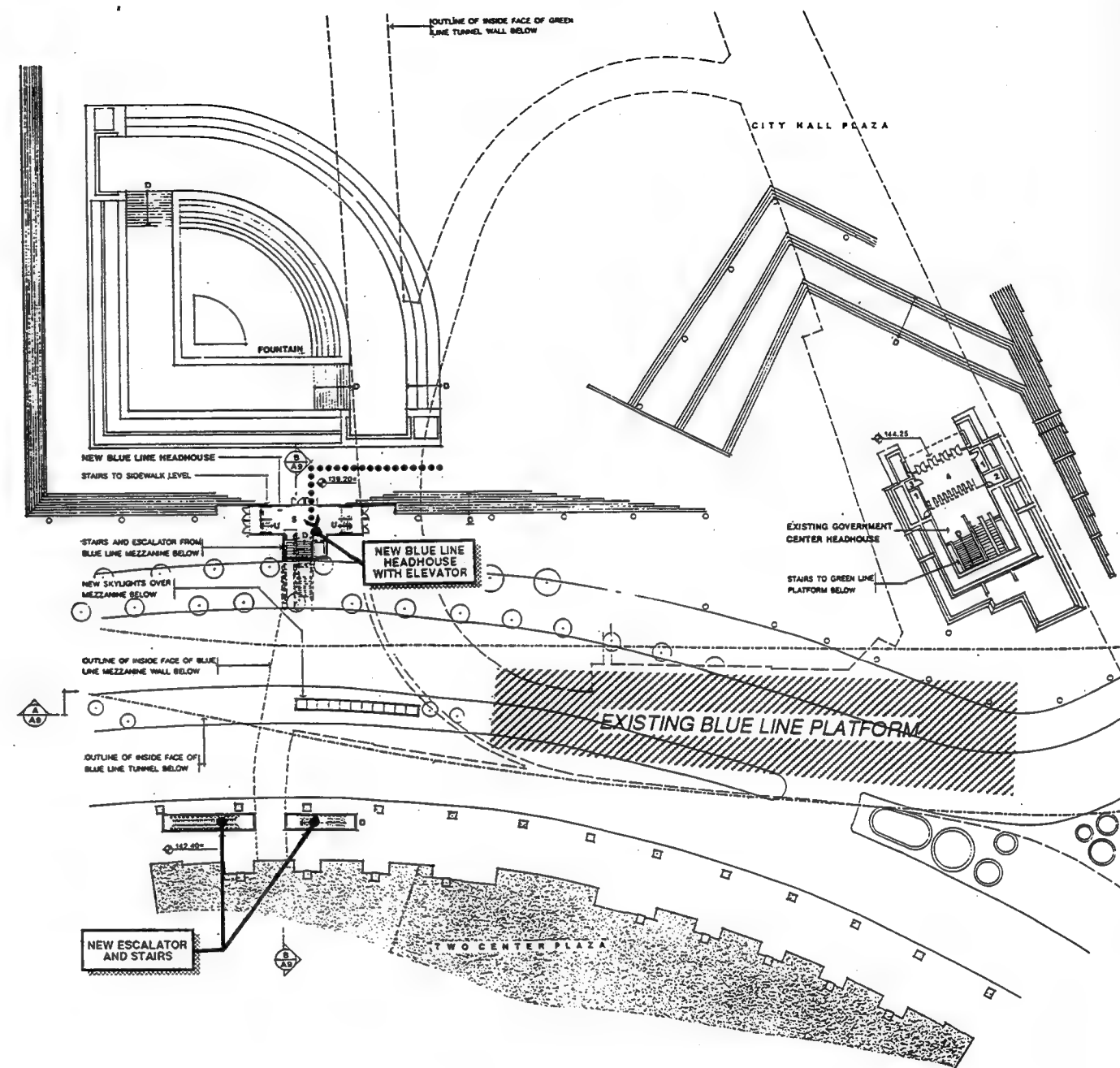
At a meeting on August 17, 1993, City of Boston agencies suggested that the MBTA consider at least three alternatives to the two new headhouses proposed in the DEIR. City agencies indicated they are not convinced the proposed new headhouse location on the City Hall Plaza side of Cambridge Street is ideally sited. City agencies cited the following concerns related to the proposed City Hall Plaza location:

- 1) It presents a constraint on City urban design plans for the potential re-use of the City Hall Plaza fountain area. (The fountain area is under study for possible re-use by the Boston Public Facilities Department. The study is not expected to be completed for several months.)
- 2) The City has concerns about maintenance problems at the existing Government Center headhouse and is convinced that construction of a new City Hall plaza headhouse will worsen the situation.
- 3) The City considers the proposed headhouse adjacent to the fountain to be in a congested location that would interfere with normal and special event pedestrian circulation at City Hall Plaza.

City of Boston agencies suggested the MBTA consider, at minimum, the following three alternatives (refer to Figure II.2):



Scheme A



Scheme B
(selected for evaluation in DEIR)



Approximate Scale: 1 in. = 75 ft.

Source:
Schematic Design Report, CPF/Domenech & Hicks, Inc./
Weidinger Associates, Inc., November 1989.

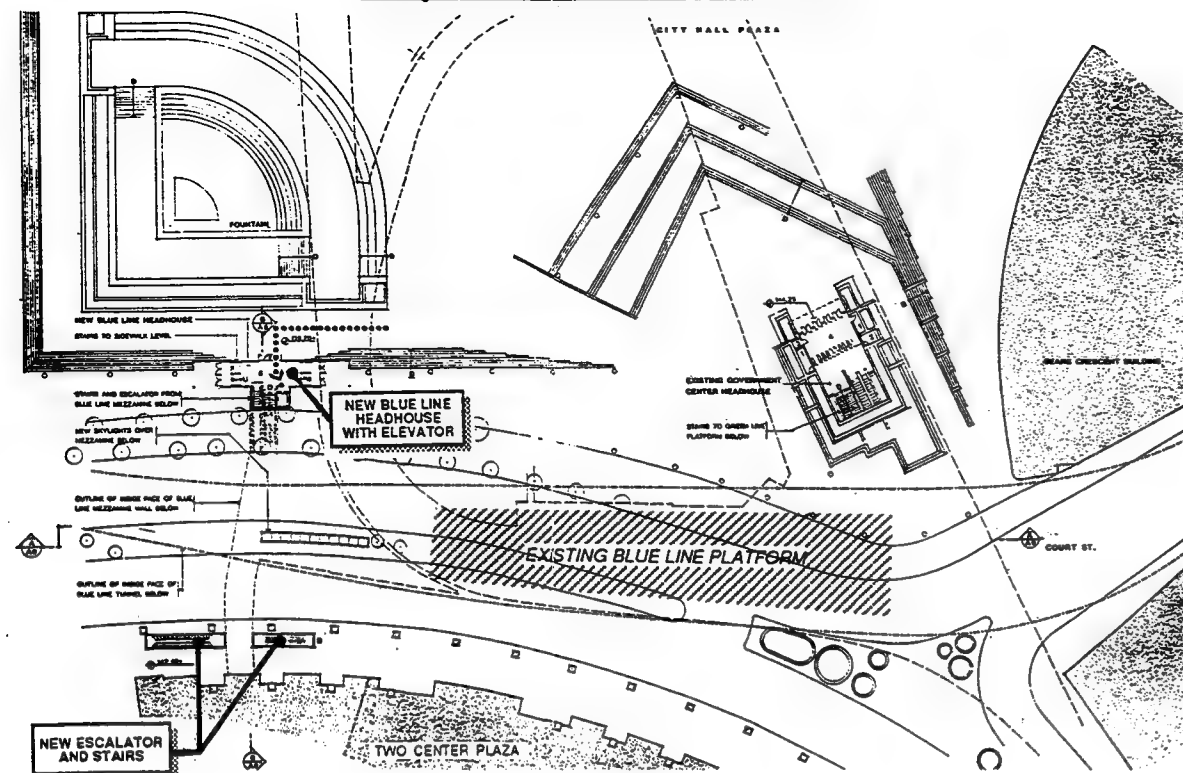
GOVERNMENT CENTER STATION PROPOSED NEW HEADHOUSE ALTERNATIVES

Ⓜ Massachusetts Bay Transportation Authority

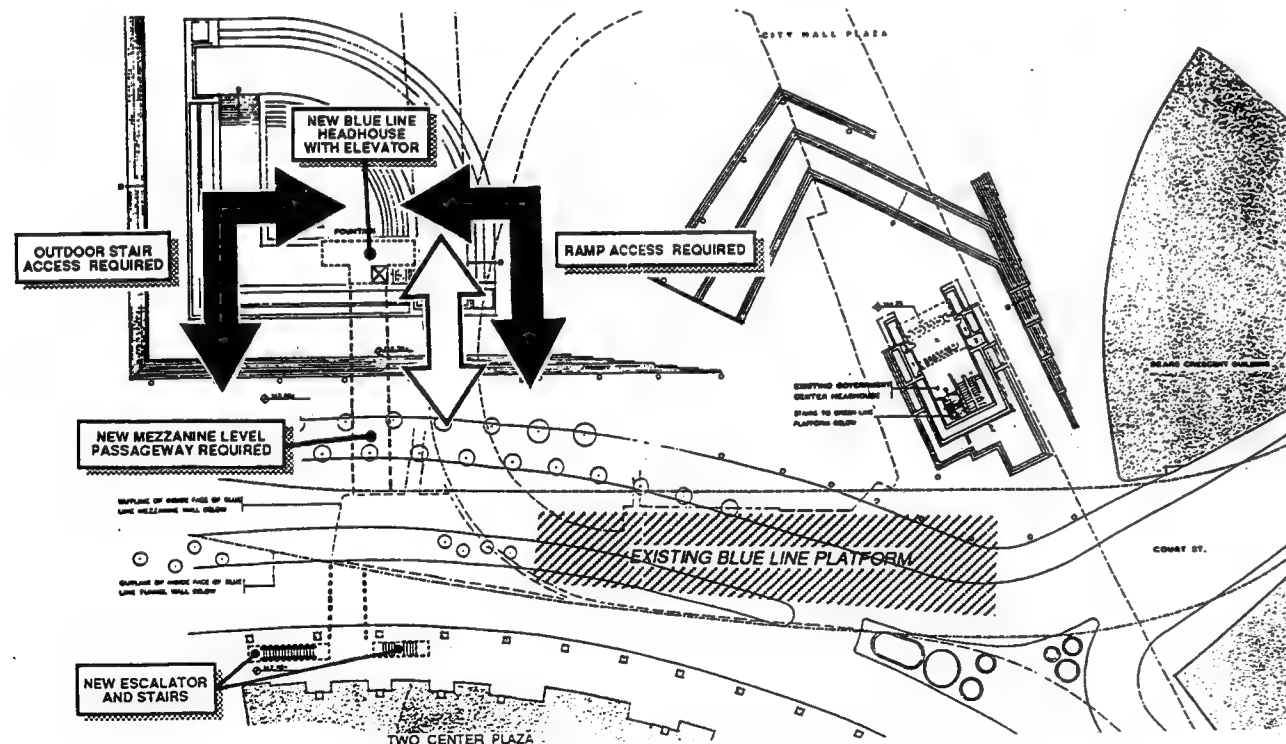
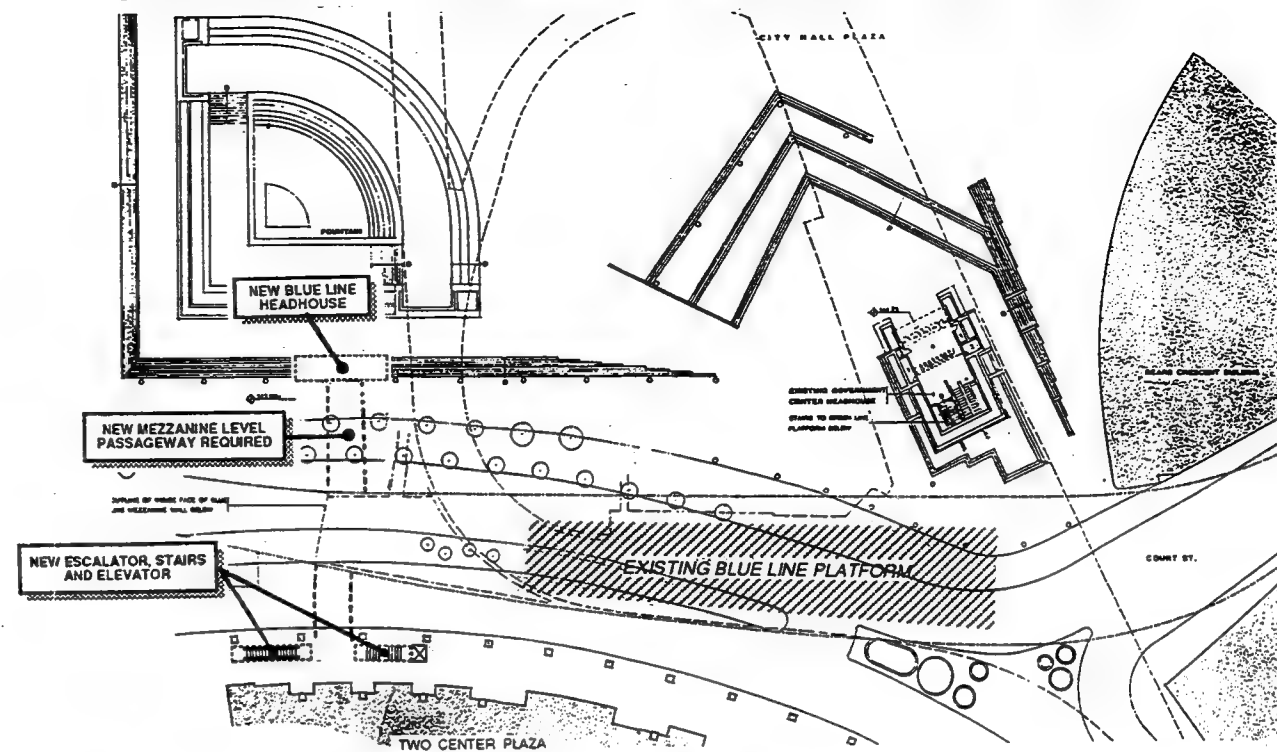
Blue Line Station Modernization FEIR

Figure II.1

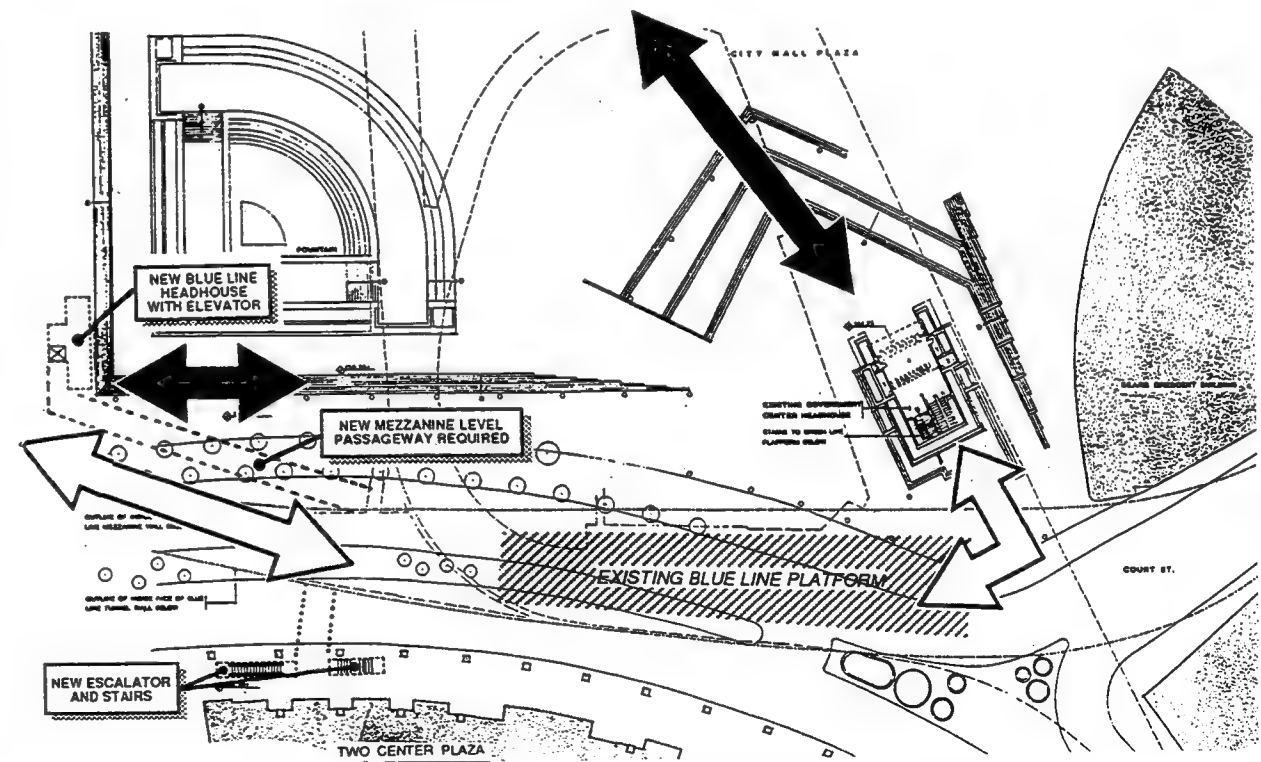
Proposed DEIR Alternative



Alternative 2 - Accessibility at Two Center Plaza Headhouse



Alternative 1 - Fountain Area Headhouse



Alternative 3 - JFK Building Area Headhouse



Approximate Scale: 1 in. = 100 ft.

Mapping Source:
Schematic Design Report, CPF/Domenech & Hicks, Inc./
Weidinger Associates, Inc., November 1989.

KEY

Additional Blue Line Passenger Walking Distance
(Compared to DEIR Headhouse Alternative)



At-Grade (Surface)



Below-Grade

GOVERNMENT CENTER STATION HEADHOUSE ALTERNATIVES

Ⓜ Massachusetts Bay Transportation Authority

Blue Line Station Modernization FEIR

Figure II.2

- 1) An alternative location of the City Hall Plaza-side headhouse into the fountain to provide a lower station roof. The proposed Two Center Plaza headhouse would remain as in the DEIR.
- 2) An alternative to provide full accessibility at the Two Center Plaza Center Plaza headhouse with a less-prominent stair and escalator-only headhouse on the City Hall Plaza side.
- 3) An alternative location of the City Hall Plaza-side headhouse toward the side of the fountain closest to the J.F.K. building. The proposed Two Center Plaza headhouse would remain as described in the DEIR.

Figure II.2 also shows at-grade and below grade pedestrian walking impacts that each alternative headhouse location will have compared to the MBTA's preferred alternative as identified in the DEIR.

C.1 Alternative 1 (Fountain Headhouse) Impacts

Alternative 1 provides a reduced visual impact than the preferred alternative from an urban design perspective. The roof of the sunken headhouse would need only be at or slightly above sidewalk level to accommodate the required mechanical equipment associated with the shaft for the accessible elevator.

Alternative 1 has serious drawbacks from the MBTA's perspective. With Alternative 1, access to the station headhouse from both directions of the Cambridge Street east sidewalk requires the use of potentially hazardous exposed stairs and/or a long access ramp. The feasibility and impacts of a required access ramp has not been established. Furthermore, it requires the MBTA to purchase additional property from the City (i.e., the costly fountain

infrastructure area) and greatly increases utility impacts of the proposed City Hall Plaza headhouse compared to the location proposed in the DEIR. Alternative 1 increases regular MBTA headhouse maintenance costs due to its required additional uncovered walkways and steps to and from the depressed fountain area.

To summarize, the MBTA considers Alternative 1 to be impractical because it:

- 1) Is less beneficial to Blue Line users than the headhouse location described in the DEIR in that it is not directly accessible from the Cambridge Street east sidewalk;
- 2) Increases MBTA construction costs substantially without benefiting its passengers;
- 3) Increases MBTA impacts on the City fountain area and requires the MBTA to perform costly and time consuming structural feasibility studies; and
- 4) Creates unnecessary walkway steps and ramps and increases maintenance safety problems/costs for the MBTA.

C.2 Alternative 2 (Fully Accessible Two Center Plaza Headhouse With Down-scaled Plaza Headhouse) Impacts

Refer back to Figure II.2 for an illustration of Alternative 2. Alternative 2 reduces visual impacts compared to the Preferred Alternative.

While it does not have drawbacks as significant as Alternatives 1 and 3, the Joint Venture station architects conclude that Alternative 2 also has substantial cost and utility impact drawbacks compared to the Preferred Alternative. It is important to understand that the headhouse on the City Hall Plaza side of the street would only be reduced in area by the size of the elevator.

According to the station architects, the structural feasibility of locating the primary Blue Line entrance with elevator access under the privately-owned Two Center Plaza arcade has not been established. Between the elevator structure, which would require the relocation of a major sewer line, and the additional impacts on Two Center Plaza below grade building foundations, construction costs with Alternative 2 are expected to be substantially higher than with the Preferred Alternative.

Since sidewalk volumes on the Two Center Plaza side of Cambridge Street are approximately one-third lower than on the City Hall Plaza side, it is highly probable that accessibility to persons who require the use of an elevator will worsen if the primary accessible entrance is located on the Two Center Plaza side of Cambridge Street.

The MBTA considers Alternative 2 to be impractical because it:

- 1) Increases impacts on the privately-owned Two Center Plaza building and raises feasibility questions due to structural limitations imposed by existing building foundations; and
- 2) Conflicts with a major sewer line on the Two Center Plaza side of Cambridge Street
- 3) Increases construction costs due to the additional utility and Two Center Plaza building impacts without any definable improvement for Blue Line passengers compared to the DEIR Preferred Alternative.

C.3 Alternative 3 (J.F.K. Building Area Headhouse) Impacts

Alternative 3 is desirable in that it does not alter the City's maintenance responsibilities (i.e., the headhouse maintenance area is located off City Hall Plaza) and provides City planners with

greater flexibility in designing alternative uses for the Plaza fountain area.

Alternative 3 conceptually has several serious drawbacks from the MBTA's perspective. It requires a long (± 100 -foot) underground pedestrian passageway from the headhouse to the mezzanine level. The necessary pedestrian tunnel raises passenger security concerns, produces greater utility impacts, and substantially increases construction costs and impacts compared to the plan discussed in the DEIR.

With Alternative 3, additional costly feasibility studies would be needed to establish whether adequate height clearance can be provided for the pedestrian tunnel connections to the mezzanine level. Furthermore, as shown on Figure II.2, the long pedestrian tunnel necessitated by locating the headhouse closer to the J.F.K. building would increase the distance to the platform for persons accessing the new headhouse from points to the southeast (e.g., City Hall users).

A reduction in the platform access distance (i.e., platform access distance being defined as the total actual walking distance between the point of origin/destination and the Blue Line platform) for users north of the station is not possible even if the Blue Line Government Center platform were to be extended in a northerly direction. According to the Joint Venture station architects/engineers, extending this platform northerly has never been a serious consideration because the existing Government Center platform is already long enough to handle six-car trains. A northerly platform extension would necessitate a very costly and disruptive realignment of the Blue Line track and tunnel toward the Bowdoin loop. This change would be needed because the Government Center Blue Line has a center-loading platform to inbound and outbound tracks.

Additionally, locating the accessible headhouse towards the J.F.K. building with Alternative 3 is considered by the Joint Venture to be in a more congested location -- from a pedestrian perspective -- than the preferred site identified in the DEIR and *Schematic Design Report* located adjacent to the Government Center Plaza fountain. This conclusion is reached because the proposed headhouse is located adjacent to the J.F.K. building entrance.

In summary, proposed Alternative 3 is considered by the MBTA to be impractical because it:

- 1) Is less beneficial to Blue Line users than the headhouse location described in the DEIR in that it would not shorten typical walking distances to the Blue Line platform;
- 2) Increases underground utility impacts;
- 3) Increases MBTA construction costs substantially without concurrent passenger benefits;
- 4) Requires costly and time consuming structural feasibility studies; and
- 5) Creates, with its required pedestrian tunnel, unnecessary and costly operational security and maintenance problems for the MBTA.

C.4 Proposed DEIR Alternative Impacts

The MBTA's preferred alternative for a new Government Center plaza-side headhouse was identified in the DEIR. After a preliminary review of the primary issues raised by the City concerning its proposed City Hall Plaza headhouse location, the MBTA concludes that it will be far more beneficial to our Blue Line passengers and cost-effective to all taxpayers to resolve issues related to the conceptual headhouse location cited in the DEIR than to attempt to resolve far more

complicated issues and policy implications associated with the three alternative headhouse locations identified by the City.

To mitigate adverse impacts of its preferred headhouse location, the MBTA commits to work with the City to resolve current and future headhouse maintenance and design issues (Refer to Section IV). Complicated headhouse location impacts will require close coordination with all City agencies.

As suggested by the Boston Redevelopment Authority (BRA) in its written comments on this Project, the MBTA will consider a more linear design approach, less constrictive to pedestrian flow patterns, to the proposed station headhouse adjacent to the fountain. Because the design of the future Government Center City Hall Plaza headhouse will not occur until after the City Hall Plaza Reconstruction Project is completed, the MBTA will integrate pertinent design elements from the City Hall Plaza Reconstruction Project into the station headhouse design efforts.

To resolve existing and future headhouse maintenance issues, the MBTA agrees to:

- 1) Provide regular coordination with City agencies to deal with maintenance/snow removal problems as they occur.
- 2) Update City agencies as needed with information concerning who to contact at the MBTA when a particular maintenance problem arises.
- 3) Contact appropriate City agencies when station cleaning contracts, currently every two years with a one year option, and station concession contracts at Government Center, currently every five years, come up for renewal. The MBTA will consider modifying station cleaning

or concession contracts to address recently identified City concerns about headhouse maintenance or delivery activities.

For example, the MBTA does not currently control delivery hours for its station concessions. Controls to limit the location and hours of deliveries could be added to new or renewed contracts, should the City indicate that such controls are needed.

Meetings have already taken place with City agencies to begin the above process.

II.1.D Government Center Station Pedestrian Impact Issues

In response to comments on the DEIR, additional pedestrian activity studies were conducted to identify pedestrian impacts during and after construction of the Government Center headhouses. The findings of these studies were presented in Section I of this FEIR.

D.2 During Construction

Maintenance of traffic/pedestrian flow plans were developed in a very preliminary manner for the DEIR. Since the exact headhouse footprint is subject to change, detailed maintenance of traffic/pedestrian flow have not been developed to date. Such plans will be developed when design resumes for the Government Center station headhouses.

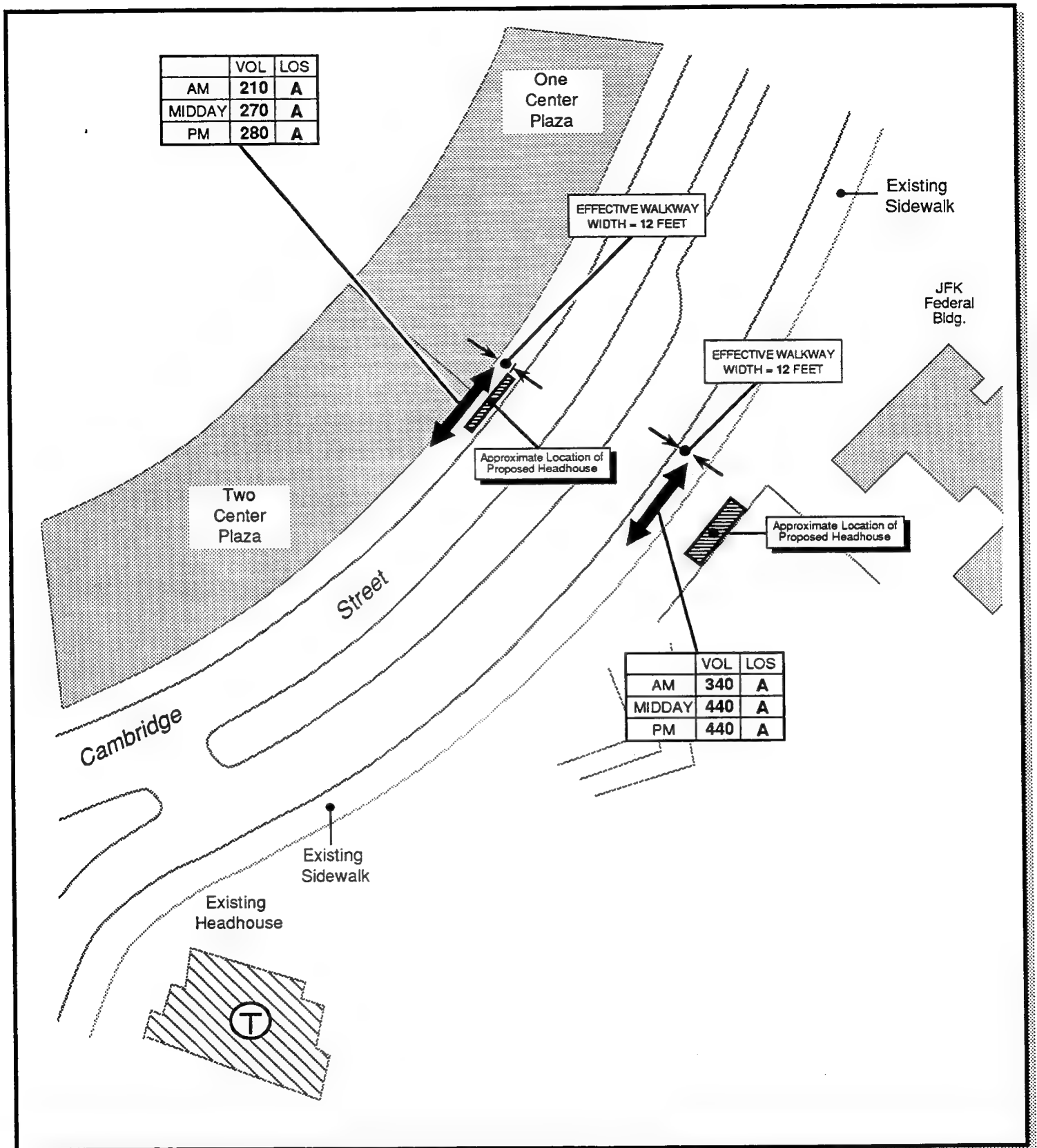
At that time, the MBTA will present draft plans to the various City of Boston agencies (BTD, BPDF, BRA, BRP) for review and full concurrence prior to construction. Care will be taken to minimize the amount of diversions required by pedestrians. While the DEIR indicated that portions of Cambridge Street will be closed, because the mezzanine level already exists, it may only be necessary to close the parking lanes closest to each headhouse during

each traffic sequence phase rather than close existing Cambridge Street travel lanes. During the construction of the proposed new headhouses, the MBTA will maintain minimum 10-foot wide pedestrian walkways on both the Two Center Plaza and City Hall Plaza sides of the street. Calculations indicate that the 10-foot minimum walkway width will be sufficient to accommodate typical peak pedestrian flow volumes on both sides of Cambridge Street at an LOS C or better. Refer to separate Technical Appendix 8 for calculations pertaining to sidewalk levels of service during construction.

D.2 Post-Construction

Refer to Section I for a description of the existing pedestrian issues in the Government Center Station area. With the proposed new headhouse locations, pedestrian circulation is expected to improve at the existing Government Center headhouse (see Figure II.3). Improvements will occur because:

- ✓ Passengers who must wait in lines to access the existing headhouse during certain hours (i.e., late afternoon and following special City Hall Plaza events) will have full accessibility to the Blue Line and will be able to access the Green Line via stairs or an escalator;
- ✓ Passenger safety in accessing the station will be improved because those who must presently cross Cambridge Street to access Government Center will be able to do so via the Two Center Plaza stair/escalator entrance.
- ✓ Passenger emergency safety will improve because the two new headhouses also provide emergency egress from the Blue Line and Green Line platform levels.



Approximate Scale:
1 in. = 130 ft.

NOTE:

Volumes represent two-way sidewalk volumes for the peak 15 minutes of the peak hour.

GOVERNMENT CENTER STATION POST-CONSTRUCTION CAMBRIDGE STREET PEDESTRIAN SIDEWALK VOLUMES AND LEVELS OF SERVICE

Ⓜ Massachusetts Bay Transportation Authority

Blue Line Station Modernization FEIR

Figure II.3

Passengers who now use Bowdoin Station will be diverted as pedestrians to sidewalks on both sides of Cambridge Street.

From Figure II.3, even with these additional pedestrian volumes, sidewalk LOS's on both sides of Cambridge Street are calculated to be LOS A during typical weekday peak hours .

II.1.E State Station Siting and Design

City agencies, commenting on the DEIR, raised concerns about the siting and design of proposed State station headhouses. City agencies suggested that the MBTA consider at least two inbound and two outbound alternative State headhouse locations (refer to Figure II.4):

E1 Alternative 1 Outbound Headhouse in 53 State Street building (i.e., the Exchange Building).

Reopening the existing outbound platform with direct access to the 53 State Street Exchange Building was found to be infeasible in the *Schematic Design Report*.. The connection from 53 State Street has long been abandoned. Only a remnant of the passageway at the subway platform remains. The interior of 53 State Street has since been altered so that there is no trace of the former passageways and stairs from the sub-basement up to the building's interior circulation system. The former access appears to have been developed for the convenience of Exchange Building employees only, not the general public. In addition to major structural and accessibility problems, creating a new entrance within the 53 State Street building could have severe impacts on an historic landmark building.

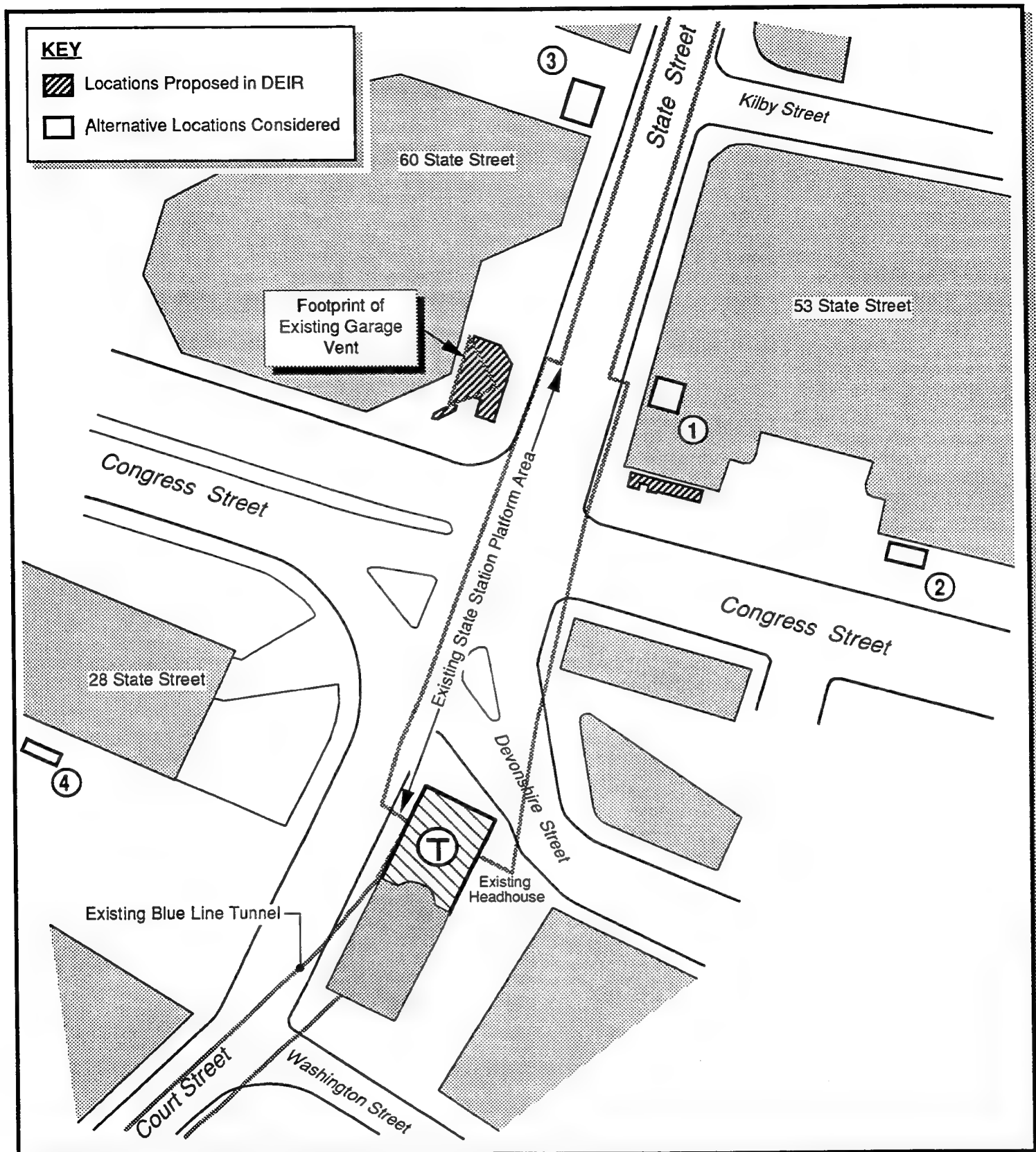
E2 Alternative 2 Outbound Headhouse at South end of 53 State Street

The remote headhouse suggested by various City of Boston agencies would be located in a much narrower sidewalk area of Congress Street than the MBTA's preferred location described in the DEIR. It would require outbound passengers coming from State Street or points north/northeast to walk a block away from the station and return underground via a long tunnel to the station platform.

Locating the entrance to the outbound platform further south along Congress Street on the other side of the 53 State Street Exchange Building entrance would create a costly and an unnecessarily long underground passage to reach the station platform. Such a long underground passage would increase construction costs, utility impacts, the duration of construction, and long term State Station maintenance and security requirements.

E.3 Alternative 3 Inbound Headhouse at State/Kilby Streets Accessway

Suggested use of the 'accessway' opposite Kilby Street was one of the first headhouse sites considered as an entrance to the inbound State station platform. However, this area houses incoming utility services and electrical switchgear facilities for the 60 State Street. In addition, this location is beyond the proposed platform extension and would require a long pedestrian tunnel and result in greater traffic, pedestrian, and utility impacts.



Approximate Scale:
1 in. = 70 ft.

STATE STATION HEADHOUSE ALTERNATIVES

Massachusetts Bay Transportation Authority

Blue Line Station Modernization FEIR

Figure II.4

E.4 Alternative 4 Inbound Headhouse
on the Washington Mall

A suggested inbound access point at 28 State Street under the Washington Mall arcade is remote from the inbound station platform and would lead to the west end of the station, essentially at the same location as the existing station entrance.

An underground passageway from 28 State Street would add to the already complex labyrinth of passages, ramps, and stair systems between the Orange and Blue Lines. Adding an elevator to the existing Washington Mall entrance was studied in considerable detail in the *Schematic Design Report*. This potential solution proved to be too costly, structurally infeasible and too remote for handicapped access between the Orange and Blue Lines.

Unlike the currently proposed headhouse locations, this location would require construction of costly emergency egress at the east end of the extended State station inbound platform.

E5 Proposed DEIR Alternative

The headhouse locations currently proposed at 53 and 60 State Street will eliminate the need for additional emergency egress stairs at the end of the new platform extension. The new proposed State station headhouse locations were selected because, according to the Joint Venture Blue Line Station designers, they provide the best solution within a complex urban environment.

As indicated in the chronology of meetings at the beginning of this subsection, the State station headhouse designs have been reviewed and revised in accordance with continuing comments from the MHC and BRA.

At a meeting with the MHC on July 16, 1992, the MHC had accepted the MBTA's State Building Code requirement for weather-protected entrances and the Joint Venture architects agreed to restudy the headhouse roof designs in accordance with the BRA's request to minimize the roof areas by using them only where required for entrance areas and weather protection. This design refinement process will continue when the project proceeds.

II.1.F State Station Pedestrian Impact
Issues

In response to comments on the DEIR, additional pedestrian activity studies were conducted to identify pedestrian impacts during and after construction of the two fully accessible State Station headhouses.

F.1 During Construction

Detailed maintenance of traffic/pedestrian flow plans, developed in a preliminary manner for the DEIR, have not been finalized to date. Such plans will be developed when design resumes for the State station headhouses. At that time, well in advance of construction, the MBTA will present draft maintenance of traffic/pedestrian flow plans to the BTD for review and concurrence prior to construction.

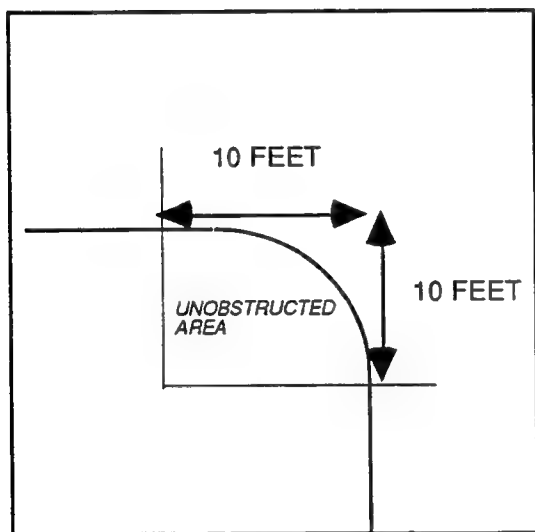
Proposed State station traffic sequencing plans (Figure 57 from the DEIR) were evaluated within the context of the July, 1993 pedestrian studies documented in Section I of this FEIR.

It was concluded that the northeast, southeast, and northwest corners of the State/Congress Streets intersection must be kept open and clear for at least 16 hours each day throughout the construction sequences. This measure is needed to avoid forcing pedestrians to encroach into the line of either Congress or State Street traffic while crossing the

intersection during any of the five proposed construction sequences. Corner LOS's during construction will therefore be comparable to those which exist today.

When design continues, the MBTA will require the Joint Venture to revise construction sequence plans so that minimum corner crossing areas of approximately 20 linear feet in each direction will be provided between the hours of 6 AM and 10 PM. During the hours between 10 PM and 6 AM, a smaller area will be provided; enough to allow construction activities to proceed without blocking the flow of pedestrians.

Illustration of Corner Pedestrian Flow Clear Zone



With the minimum unobstructed crossing areas as illustrated above, corner pedestrian levels of service are not expected to fail during typical weekdays.

Observations indicate that the State Street crosswalk on the west side of the intersection to the Old State House has the lowest volumes of the four crosswalks at the intersection. Crossings on this particular crosswalk have not been included in this analysis because they will not be affected after the project.

Crossings at this crosswalk will be affected briefly during construction of the ramp connecting the Orange Line platforms to the Blue Line inbound platform. Observations indicate existing volumes on this crosswalk operate at LOS A and will continue to do so throughout construction, assuming the pedestrian corner and after the proposed State station improvements and new headhouses are constructed. Pedestrian volumes in this crosswalk will be unaffected after this project is completed.

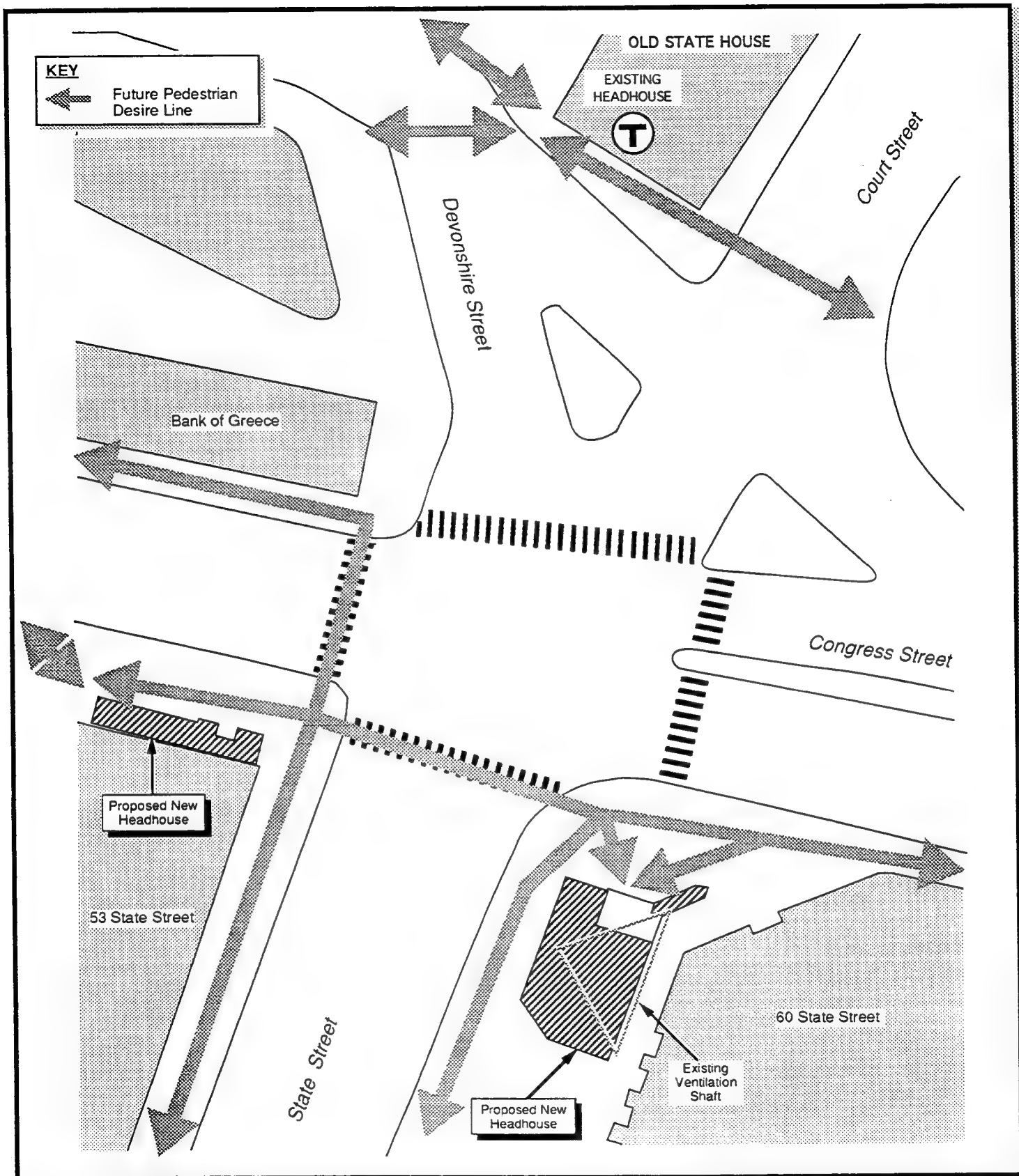
Refer to separate Technical Appendix 8 for calculations pertaining to sidewalk levels of service during construction.

F2 Post-Construction

Refer to Section I for a description of the existing pedestrian issues pertaining to the State station area.

With the proposed two new State headhouse locations, pedestrian circulation is expected to improve substantially. Figure II.5 illustrates pedestrian access desire lines to State station following construction and opening of the two new headhouses. Compared to the No-Build alternative (refer back to Figure I.4 in Section I for No-Build alternative pedestrian desire lines), improvements will occur because:

- ✓ Passengers who must cross Congress Street to access the existing Old State House headhouse will be able to access State station more safely without crossing the intersection. Therefore, future pedestrian crossing volumes of Congress Street will also be reduced.
- ✓ Passenger emergency safety will improve because the two new headhouses also provide emergency egress from the Blue Line platform level.



STATE STATION

POST CONSTRUCTION PEDESTRIAN
DESIRE LINES (STATION ACCESS and EGRESS ONLY)

Ⓣ Massachusetts Bay Transportation Authority

Blue Line Station Modernization FEIR

Figure II.5

- ✓ All passengers, including those with special needs, will have full accessibility to State Station services in full compliance with local, State, and Federal requirements.

The MBTA therefore concludes that the proposed new State Station headhouses will generally have a positive impact on post-construction pedestrian flow in the area of State station. Fewer street crossings will be required and walking distances will be reduced for pedestrians who access the station to and from areas east, northeast, and southeast of the existing Old State House headhouse.

II.2 STATION MAINTENANCE IMPACTS

The MBTA assumes full responsibility for normal maintenance of its existing and future State and Government Center headhouses.

The MBTA System Services Department is responsible for administering agreements with private contractors to ensure that station entryways and interiors are clean and free of trash and debris. The MBTA Department of Real Estate is responsible for administering concessions agreements with private contractors.

II.2.A Downtown Station Headhouse Cleaning/Maintenance Issues

Station cleaning contracts are issued in two year intervals with a one-year option for renewal. Station cleaning procedures at the new headhouses are therefore subject to periodic change. Typical current station cleaning policies and procedures include, for example:

- ✓ Inspect and clean stairs to the downtown headhouses a minimum of 2-3 times per day to keep them clear of debris, including snow and ice.

Address snow and ice conditions as they occur.

- ✓ Keep walks to the downtown headhouses clear of snow, ice and other debris adjacent to each headhouse on a location by location basis. It is the MBTA's policy to keep direct pedestrian access to station entrances clear of snow, ice, and debris from the nearest curb cut or bus stop, whichever is closest.
- ✓ Remove graffiti from headhouses as soon as possible after discovery, usually within 24 hours.
- ✓ Provide trash receptacles at each station headhouse. It is the responsibility of the private station cleaning contractor to empty the receptacles when filled or at the end of each service day, whichever comes first.

II.2.B Station Concessions

The MBTA Department of Real Estate specifies concession hours of operation and maintenance requirements. Since concessions are located within MBTA station headhouses, the division of maintenance responsibilities is such that concession contractors are responsible for wastes generated within their lease areas only. Station cleaning contractors are responsible for the removal of all other station headhouse wastes and cleaning activities.

The MBTA System Services and Real Estate Departments, in conjunction with the General Manager's Office, are continuously reviewing standard operating procedures for private contractors. The MBTA welcomes City of Boston suggestions on how station maintenance procedures can be modified to benefit City and MBTA needs.

II.3 TEMPORARY CONSTRUCTION PERIOD MBTA TRANSIT SERVICES

The MBTA will provide alternative mitigating transit services during the one year period between June 1994 and June 1995 when Wonderland, Revere Beach, Beachmont, and Suffolk Downs Stations are closed temporarily to expedite station improvements.

While seeking to minimize adverse impacts on the Orient Heights area, the MBTA is committed to ensuring that our passengers will be served adequately and minimally inconvenienced during this period.

In response to DEIR comments received, the MBTA is revising its initial replacement bus service program at the Orient Heights Station area and will be improving other MBTA services besides the proposed shuttle bus service program between Wonderland and Orient Heights Stations.

At the outset of the program, the MBTA will operate 32 replacement bus trips per hour along the corridor rather than 40 bus trips per hour as described in the DEIR. A maximum of 20 buses per hour will be needed on the Bennington Street/Ocean Avenue shuttle bus corridor rather than the 24 buses cited in the DEIR. The MBTA will shuttle Blue Line passengers between affected stations at a level of service comparable to that provided by the Blue Line. This 20 % reduction in bus operations has been proposed to reduce impacts to the Orient Heights area while assuring adequate service to our passengers. The passenger capacity loss from the service reduction (approximately 450 passengers per hour) will be more than compensated for by other MBTA replacement services discussed below.

During the program, express buses between Wonderland and Orient Heights

Station will operate generally in proportion to the Blue Line ridership needs. Approximately 55% of Blue Line passengers between Wonderland and Orient Heights Stations presently board at Wonderland Station. Therefore, approximately half of the shuttle buses will be express buses. Bus layovers will occur only at locations where they will not interfere with shuttle bus operations or adversely affect street traffic and adjacent land uses.

Inbound shuttle buses will be free to all passengers who board at the four closed stations of Wonderland, Revere Beach, Beachmont, and Suffolk Downs and leave at Orient Heights Station. However, an 85 cent fare will be charged to passengers upon exiting when they leave the buses at intermediate stations (e.g., Revere Beach, Beachmont, Suffolk Downs).

Similarly, outbound shuttle buses will be free to all passengers who board at Orient Heights Station and disembark at any of the four closed stations. Outbound passengers who board buses at the intermediate stations will be charged an 85 cent fare upon boarding.

In response to comments received on the DEIR and to minimize the potential loss in ridership due to the reduction in shuttle bus capacity along the corridor, the MBTA will take the following actions during the shuttle bus period:

- 1) The MBTA will improve Orient Heights Station fare collection infrastructure and accessibility features. During the temporary shuttle program, the MBTA will modify the layout of Orient Heights Station as follows (refer to Section IV - Mitigation Commitments for an illustration of these features):

- ✓ A portion of the iron fence on the Bennington Street side of Orient Heights Station will be removed, the

toll collector's booth will be temporarily relocated adjacent to 12 new temporary fare collection turnstiles that will be installed on the northerly end of the station's inbound platform, replacing the existing 5 turnstiles.

- ✓ The existing fare collection area will be closed, but retained for emergency purposes.
- ✓ The shuttle bus stop will be located adjacent to new fare collection area.
- ✓ At all times during the shuttle bus program, the MBTA will provide an accessible vehicle service at the Barnes Avenue bus loop adjacent to the outbound platform to pick up passengers who, for physical reasons, are unable to climb the Orient Heights station stairs to the inbound platform. The accessible vehicle will bring these passengers to the shuttle buses on the Bennington Street busway.

On the basis of the July 1992 survey of passengers at Wonderland, Revere Beach, Beachmont, and Suffolk Downs stations (refer to Section III of the DEIR), commuter parking demands are not expected to increase at Orient Heights Station during the temporary shuttle bus program. Nonetheless, should East Boston residents complain that on-street transit related parking demands increase in the Orient Heights area during the one-year replacement bus program, and if authorized to ticket by the Boston Transportation Department, the MBTA will allocate a police detail to assist the City in enforcing existing on-street parking regulations in the Orient Heights Station area during the one-year program. Furthermore, in the unlikely event it becomes necessary to modify on-street parking controls in the Orient Heights Station area because of increased commuter parking on neighborhood streets, the MBTA will purchase and

install such signs upon authorization from the City of Boston.

The MBTA will permit free vehicle pick-up -- i.e., 'live parking' -- access to any available parking spaces within the Orient Heights Station commuter parking lot during the hours of 3-6 PM for passenger pick-up activities. During this period, it is likely that parking spaces closest to the station -- those which fill and empty first -- will be available for passenger pick-up use. This change will have little or no impact on station parking revenues. This action will be taken to keep local passenger pick-up activities off local East Boston streets adjacent to the station. The MBTA will obtain and post signs in the station and, if authorized by the City of Boston, on local streets adjacent to the station to alert Orient Heights Station users of the modifications to the passenger pick-up rules.

- 2) The MBTA will provide and market expanded bus service on its 440 bus route series which provide service between Marblehead, Swampscott, Lynn and Downtown Boston. The existing 440 bus routes not only stop on Route 1A in front of Wonderland Station connecting to the Blue Line, but also stop at Haymarket Station connecting to the Orange and Green Lines in downtown Boston. Currently, the 440 routes also serve the Lynn Station/garage and provide on demand service to the Blue Line Wood Island Station in East Boston.

During the shuttle bus period, the MBTA will commit four additional buses per hour to the 440 bus routes and will heavily market this alternative service. During the morning peak hours the additional 4 buses will end at the Wood Island Station and turn back towards Marblehead. During the afternoon peak hours the additional buses will travel all the way to Haymarket Square in downtown Boston.

Figure II.6 schematically illustrates the existing 440 route bus stops at the Lynn Station/garage. These stops are located on Market and Broad Streets. Figure II.6 also shows the relative location of the Lynn Station/garage commuter rail and bus services vis-a-vis the garage vehicle entrance.

2) The MBTA will provide and market expanded bus service on its 440 bus route series which provide service between Marblehead, Swampscott, Lynn and Downtown Boston (Cont.)

Figure II.7 illustrates the inbound and outbound route deviations proposed for the 440 route bus route to access Wood Island Station during the shuttle bus period. The inbound stop will require a crossing of Bennington Street.

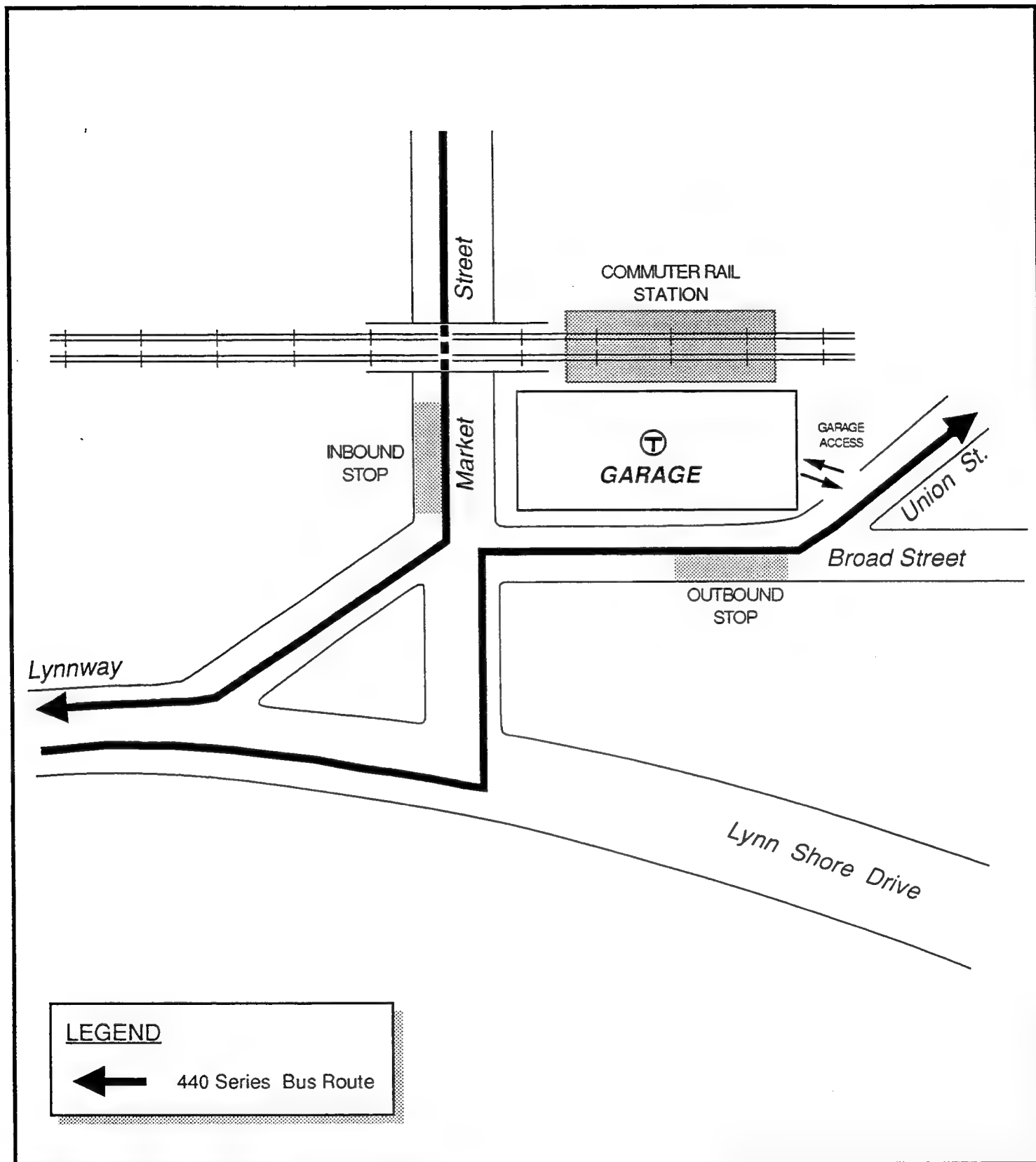
The outbound stop is provided as a normal part of the existing route; the inbound stop will be provided upon passenger demand.

Inbound buses requested to stop at Wood Island Station will exit Route 1A at Bremen Street, make a left onto Curtis Street, right onto Bennington Street to the Wood Island station stop. Passengers using this stop will avoid an extra transfer to the shuttle buses at Wonderland station. From the Wood Island station stop, buses will follow Bennington Street left to the Route 1A southbound ramp. The inbound stop will add approximately 3-4 minutes to inbound trips to Haymarket on the Route 440 series.

Outbound from Boston, buses, as currently scheduled, will exit Route 1A right at Porter Street, make a left on Chelsea Street, and a right on Bennington Street to the Wood Island station stop. The buses will then turn left onto Swift Street and right to the Route 1A northbound on-ramp.

Wood Island station will be under construction for modernization improvements during the shuttle bus program. A busway which normally serves the station off Bennington Street will be closed but a Bennington Street busbay off the street will be provided which can accommodate up to two buses simultaneously. The walk between the bus stop and the station platforms will be ± 350 feet. Access to the station for pedestrians will vary during the shuttle bus program. Illustrated on Figure II.8, during the first few months of the program which will coincide with the first construction sequence for Wood Island station, pedestrians will use a 25' wide walkway on the north side of the right-of-way between Bennington Street and the station platforms. During most of the shuttle bus program, it is anticipated that the south portion of the station open to passengers will be newly renovated. During this period, pedestrians will use a similar 25' wide walkway on the south side of the right-of-way between Bennington Street and the station platforms.

The MBTA anticipates that the primary users of the Wood Island Station stop will be inbound riders who have downtown destinations better served by the Blue Line via Wood Island station than the Green or Orange Lines at Haymarket Square and who desire to avoid a double transfer. The MBTA anticipates that most outbound riders will continue to access the 440 buses from Haymarket Square in downtown Boston.



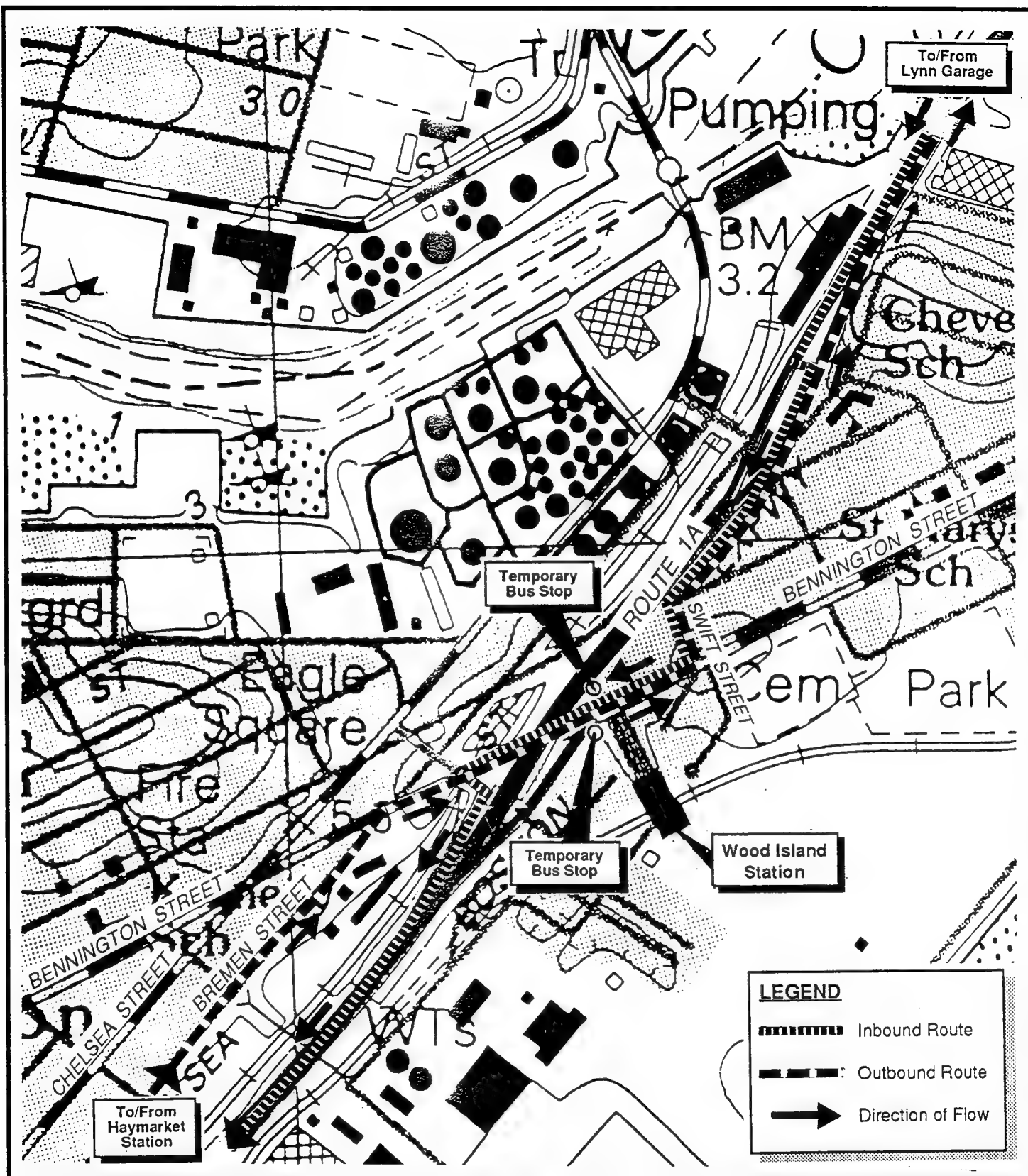
Schematic Diagram: Not to Scale

440 BUS ROUTE SERIES LYNN GARAGE BUS STOPS AND BUS CIRCULATION PATTERN

Ⓣ Massachusetts Bay Transportation Authority

Blue Line Station Modernization FEIR

Figure II.6



Approximate scale: 1 in. = 500 ft.

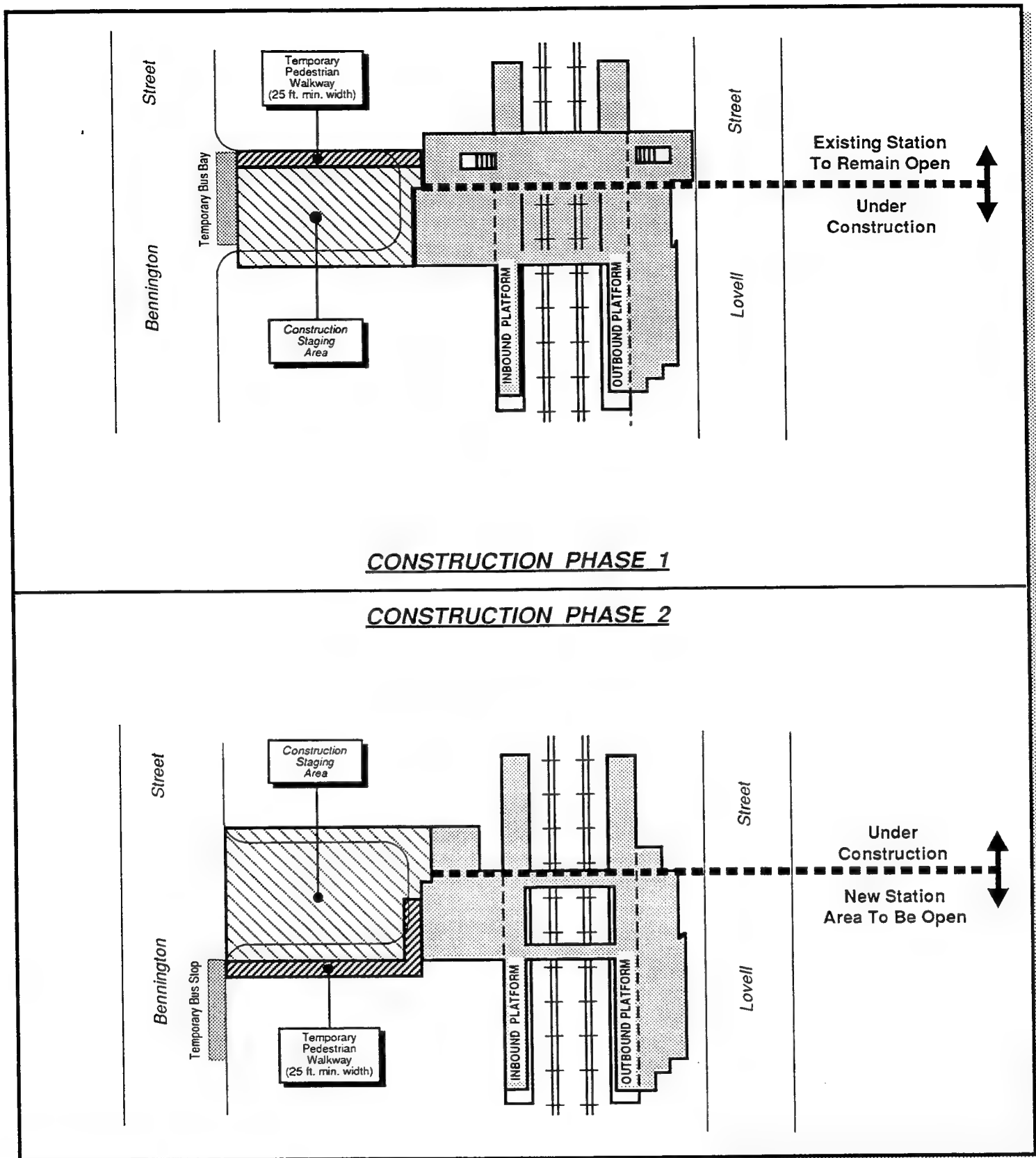
SOURCE:
U.S.G.S., Boston North Quadrangle

440 BUS ROUTE SERIES BUS ROUTING FOR PROPOSED WOOD ISLAND STATION STOP

Ⓜ Massachusetts Bay Transportation Authority

Blue Line Station Modernization FEIR

Figure II.7



Schematic Diagram: Not to Scale

SOURCE:
Parsons, Brinkerhoff, Quade & Douglas, Inc.,
Construction Phasing Diagram dated 6-8-93.

WOOD ISLAND STATION PASSENGER ACCESS/EGRESS DURING CONSTRUCTION PHASE

Ⓜ Massachusetts Bay Transportation Authority

Blue Line Station Modernization FEIR

3) The MBTA will take steps to increase the use of the Lynn Station/Garage:

Lynn Garage has not been well used since its opening early in 1992. There are at least four reasons why this garage is not well used:

- 1) A perception that the peak hour service is not frequent enough to increase its use (i.e., peak hour service with greater than 20 minute frequencies),
- 2) Services provided are more expensive (\$76/month from Lynn Station) than the Blue Line rapid transit service (\$27/month plus \$2 per day parking),
- 3) Commuter rail services end at North Station and therefore require transfers by regular Blue Line riders who may have destinations in the vicinity of Aquarium, State, Government Center, and Bowdoin stations, and
- 4) Available services are not well known and marketed to potential users.

Due to financial constraints, the MBTA is unable to provide additional commuter rail services during the temporary one-year period when the Blue Line is shut down between Wonderland and Suffolk Downs Stations. Also, systemwide passenger fare equity issues prohibit the MBTA from reducing fares at the Lynn commuter rail station during the temporary shutdown.

Nonetheless, the MBTA recognizes the importance of increasing the use of the Lynn garage during the temporary shuttle bus service program and will take the following steps (refer to Section IV - Mitigation Commitments):

✓ Continue to provide free parking to users at the Lynn garage during the shuttle bus program.

Free since its opening in January, 1992, the MBTA will continue to permit free parking in this garage throughout the shuttle bus program. The garage can be used to serve increased services on the 440 series bus routes as well as commuter rail services.

✓ Increase marketing of the Lynn Station/garage services during the shutdown.

The MBTA will coordinate with the Massachusetts Highway Department (MHD) and the Metropolitan District Commission (MDC) to provide four additional external trail blazing signs to the Lynn Station/garage. The placement of two temporary external signs -- in advance of and at the Lynn garage entrance -- on Route 1A will be coordinated with the MHD. Similarly, the placement of two temporary signs on the Lynn Shore Drive -- in advance of and at the intersection with Market Street -- will be coordinated with the MDC.

Additionally, since the publication of the DEIR, the MBTA has undertaken a separate *North Shore Transportation Study* which is scheduled to be completed in the near future. This separate study is a preliminary evaluation of various long range approaches to improving North Shore public transportation services. It includes analyses of various potential modifications to Blue and Orange Line rapid transit, commuter rail, and bus services. Possibilities for improving long term use of the Lynn Station/Garage are among the issues addressed in that study.

II.4 HISTORICAL AND ARCHAEOLOGICAL IMPACTS (REVISION FROM DEIR)

II.4.A Potential Archaeological Resources

Based on the results of the background research, impact assessment from subway construction, utilities, foundations, etc. and on observations made during the walkover, it is unlikely that any intact prehistoric or historical sites exist within the State Street or Government Center Project Areas. These areas are not believed to contain significant prehistoric or historical cultural resources and therefore appear not to contain resources that would be eligible for National Register nomination.

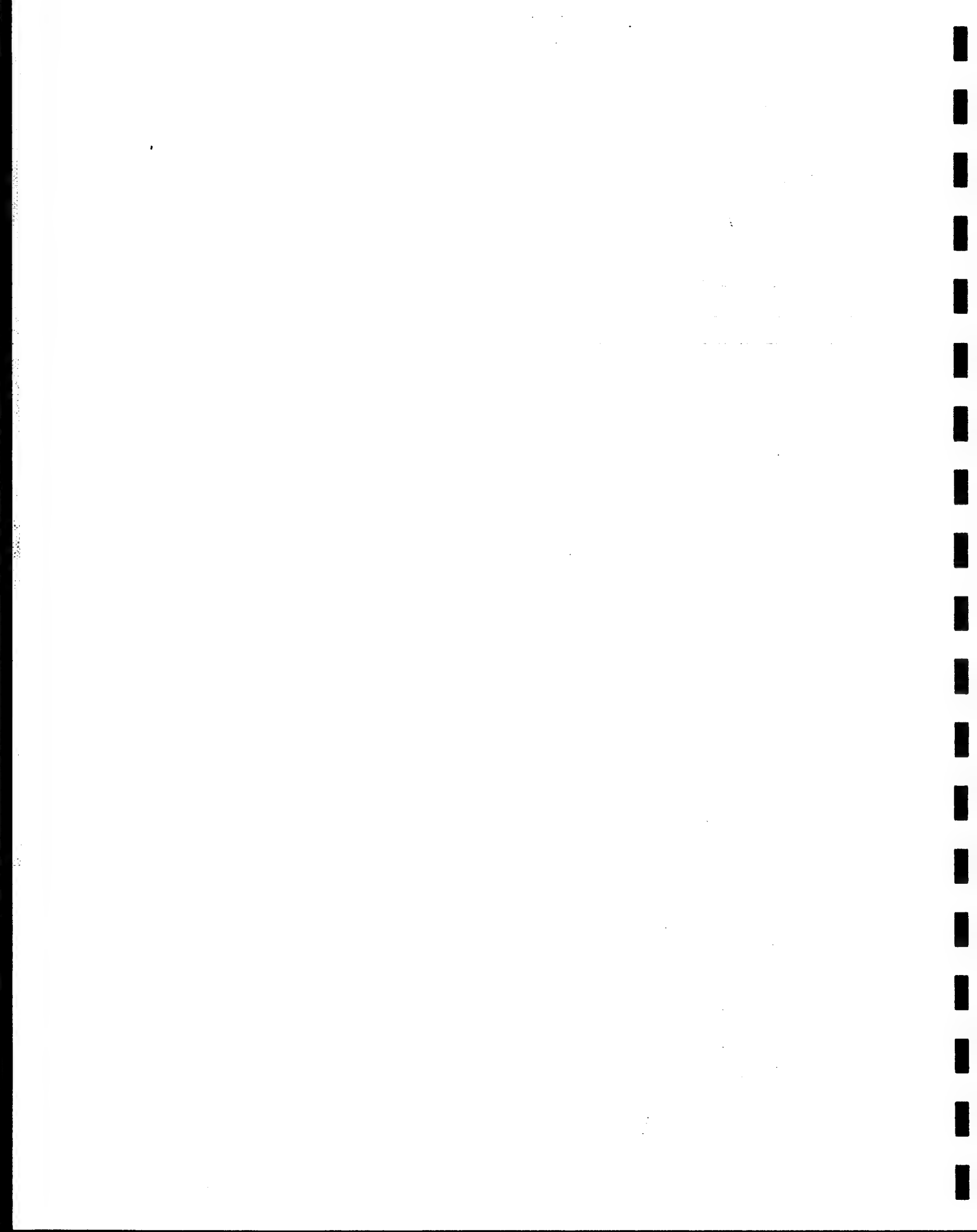
II.4.B Recommendations

The MHC concurs with the recommendation to conduct no further archeological work for the State Street or Government Center Project Areas since no significant intact cultural resources are expected in these project areas.

II.5 NOISE IMPACTS

The DEIR indicated that Blue Line noise problems will not significantly increase when six-car trains are added following construction of the Blue Line Station Modernization Program. Nonetheless, the MBTA recognizes the magnitude of public concern about existing noise and vibration impacts on Blue Line abutters.

To address these concerns, the MBTA is taking major steps to ensure that feasible noise mitigation measures are implemented to mitigate adverse Blue Line noise impacts as soon as possible. These are described in Section IV.1.B.



Section III
RESPONSE TO COMMENTS

III. RESPONSES TO COMMENTS

This section of the FEIR provides responses to comments received on the DEIR.

Following the publication of the DEIR, the MBTA organized and held three public meetings during April 1993 to solicit public comments on the DEIR. Meetings were held in downtown Boston, East Boston, and Revere.

During these meetings, and subsequently in written comments to the Secretary of Environmental Affairs, most commenters indicated their broad general support for the Blue Line Station Modernization Project.

Several concerns, however, were expressed verbally and in writing about the Project. Noise and vibration impacts were, by far, the most frequently cited public concern. Most of the noise-related comments dealt with the severity of existing and future noise impacts of the Blue Line in East Boston and Revere, as opposed to construction-related noise. Other frequently-cited comments included the future closure of Bowdoin Station, pedestrian impacts and headhouse design issues at downtown Boston stations, and the need to explore alternative MBTA services during the one-year Blue Line shutdown between Orient Heights and Wonderland Stations. Referenced comment letters and comments are provided at the end of this section.

III.1 STATE LEGISLATOR LETTERS AND RESPONSES

1) State Representative Emanuel G. Serra, Assistant Majority Whip

Subject: Noise Mitigation

The MBTA is taking strong actions to alleviate Blue Line related noise and vibration impacts. These actions are identified in Sections IV.1.B and IV.1.D of this report. To summarize these actions, the MBTA is 1) undertaking a two-year systemwide study of noise, 2) developing a systemwide noise/vibration impact policy statement, and 3) allocating \$8 million for Blue Line noise mitigation funds to be expended concurrent with the Blue Line Station Modernization Project.

2) State Representative Emanuel G. Serra, Assistant Majority Whip

Subject: Compliance With Noise Mitigation Request

Refer to Comment response 1; the MBTA is complying with this request.

3) State Senator Robert E. Travaglini

Subject: Commitment To Review Noise And Vibration Impacts

See response to Comments 1 and 2.

4) State Representative Robert A. DeLeo

Subject: Noise Mitigation

See response to Comments 1 and 2.

5) State Representative Robert A. DeLeo

Subject: Bowdoin Closure

A comprehensive survey of Bowdoin Station riders was conducted in July 1992. Findings of this survey were presented in the DEIR and separate Technical Appendix 5 - Traffic.

Even though 22% of Bowdoin passengers will have shorter walking distances to and from the new Government Center headhouses, the MBTA recognizes that the closure of Bowdoin Station represents an inconvenience to most Bowdoin passengers who, on average, must walk an additional ± 200 feet to the proposed new Government Center headhouses.

The MBTA provides a direct Massachusetts General Hospital (MGH) stop on the Red Line which can be accessed, though admittedly somewhat inconveniently, by Bowdoin passengers most adversely affected by the closure. Use of the Red Line Charles/MGH Station to access the Blue Line requires a double transfer either to or from the Green and Red Lines. MGH also runs an existing private shuttle bus service for its patients and employees on a route between the Charlestown Navy Yard, North Station, and MGH. Bowdoin MGH patients or employees who use Bowdoin Station may have the option to use this service.

After the Bowdoin Station closure, average walk distances to the new Government Center headhouses or the alternative Red Line headhouse by Bowdoin Station passengers will still be under a quarter-mile -- the standard maximum walking distance service area for rapid transit stations.

Recognizing the inconvenience the Bowdoin closure will create for most Bowdoin passengers, the MBTA

commits that it will not close Bowdoin Station until six-car trains can be put into service -- the year 1999 at the earliest. Meanwhile, the MBTA (see Section IV.2.A) will continue to pursue funding the design and construction of the Red/Blue Line Connector within the context of other MBTA service priorities annually.

6) State Representative Robert A. DeLeo

Subject: Orient Heights Station Bus Circulation

The MBTA is currently evaluating post-construction bus and pedestrian circulation issues at Orient Heights Station -- including the suggested circulation pattern which existed prior to the restrictions on the Scarpa Bridge. In the near future a report documenting the findings will be made available to the public for review and comment. The MBTA will hold public meetings in East Boston and Winthrop to discuss the findings. The MBTA welcomes public comments regarding this report and will incorporate local input into the final decision on long term Orient Heights Station bus circulation. The final evaluation will take into account the concerns of adjacent East Boston neighborhoods, the Winthrop bus passengers, and MBTA operational logistics in searching for a balanced solution. The MBTA generally will implement a future bus circulation pattern at Orient Heights Station which is safest for our passengers and least adversely affects the Orient Heights Station area.

III.2 STATE AND REGIONAL AGENCY LETTERS AND RESPONSES

7) Department of Environmental Protection

Subject: Station Parking Fees During The Shuttle Bus Program

The DEIR reported that 15% of Blue Line riders surveyed at the Wonderland, Revere Beach, Beachmont, and Suffolk Downs Stations indicated they were likely or very likely to drive to their destinations. Nonetheless, given the success of other MBTA shuttle bus programs (e.g., the MBTA Red Line Dorchester Branch/Needham Commuter Rail replacement bus services), a much smaller shift to driving, if any, is actually anticipated by the MBTA.

Even if additional downtown Boston parking spaces were available to Blue Line commuters, out of pocket driving costs will typically be 3 to 4 times as high as costs incurred by those riders who will use the temporary replacement shuttle bus program (e.g., additional downtown parking costs of \$6-\$8 per day, additional mileage and vehicle operating costs of more than 25 cents per mile, additional traffic congestion delays, and additional tolls). This fact does not change even if current MBTA parking fees are retained during the shuttle bus program. Refer to the DEIR for a discussion of the existing supplies and demands for parking at the MBTA Blue Line commuter parking lots, which are very well used and are expected to continue to be well used during the shuttle bus program.

As the driving option is relatively expensive and time consuming, the MBTA anticipates only a small reduction in North Shore corridor transit ridership will actually occur during the temporary shuttle bus program. Put simply, besides alternative available MBTA services which the MBTA will improve during the

temporary shuttle bus program (see Section II.3), most current Blue Line riders have few cost effective travel alternatives available to them.

As Central Artery/Tunnel project construction progresses, the availability of parking spaces in downtown Boston will decrease. The Environmental Protection Agency has imposed a freeze on new public downtown Boston parking. Virtually no additional public parking spaces are available to serve riders who might otherwise consider driving into Boston.

The MBTA strives to be as cost efficient as possible within our service policy obligations. Temporarily reducing or eliminating parking fees at Wonderland or Beachmont Blue Line Stations at the outset of the program will adversely affect the MBTA's operating deficit without increasing ridership and is not being proposed.

The MBTA will, however, continue to provide free parking at the Lynn garage to increase ridership on alternative commuter rail services and feeder bus services adjacent to the Lynn Station.

Conversely, increasing parking fees at Orient Heights Station would be unfair to regular patrons of Orient Heights and will not encourage greater transit use during the shuttle bus program.

The MBTA agrees with the DEP's recommendation to conduct a publicity campaign and will do so prior to and during the shuttle bus program (Refer to Section IV.1.A - Mitigation Commitments).

8) Massachusetts Historical Commission

Subject: Archaeological Resources

In response to MHC's request, and as a subconsultant to Fay, Spofford &

Thorndike, Inc., Boston Affiliates, Inc., with Alan E. Strauss as Principal Investigator, undertook an archaeological reconnaissance survey under MHC permit number 1281. This study is documented in a report entitled *Archaeological Reconnaissance Survey, Blue Line Station Modernization Project, Bowdoin to State* (Boston Affiliates, Inc., July, 1993). The MHC concurred with the findings of this report in a letter to MEPA dated October 4, 1993.

The goals of the reconnaissance survey were to identify whether archaeological resources exist in the project area, whether they meet the criteria for listing in the National Register, and whether the proposed project will impact them adversely.

The reconnaissance survey consisted of background research followed by an assessment of existing conditions and isolation of areas believed to have the greatest sensitivity for containing undisturbed cultural resources.

Based on the results of the background research, impact assessment from subway construction, utilities, foundations, etc. and on observations made during the walkover, it is unlikely that any intact prehistoric or historical sites exist within the State Street or Government Center Project Areas. These areas are not believed to contain significant prehistoric or historical cultural resources and therefore appear not to contain resources that would be eligible for National Register nomination.

9) Massachusetts Historical Commission

Subject: Design Consistency With Nearby Historical Structures/ Headhouse Stair Roofs

Preliminary at grade elevations of the State Station headhouses at 53 and 60 State Street are shown on Figures III-1

and III.2. These figures include examples of conceptual materials for these headhouses. The State Station headhouses are at the 30% design stage and are subject to revision to incorporate MHC and City of Boston agency Comments.

The MBTA agrees to continue working closely with the Massachusetts Historical Commission through the Section 106 process and the City of Boston agencies to identify the appropriate materials and new headhouse designs consistent with the built environment in the area of State and Government Center Stations. The MBTA will coordinate its headhouse design activities for State and Government Center Stations with all affected City of Boston agencies.

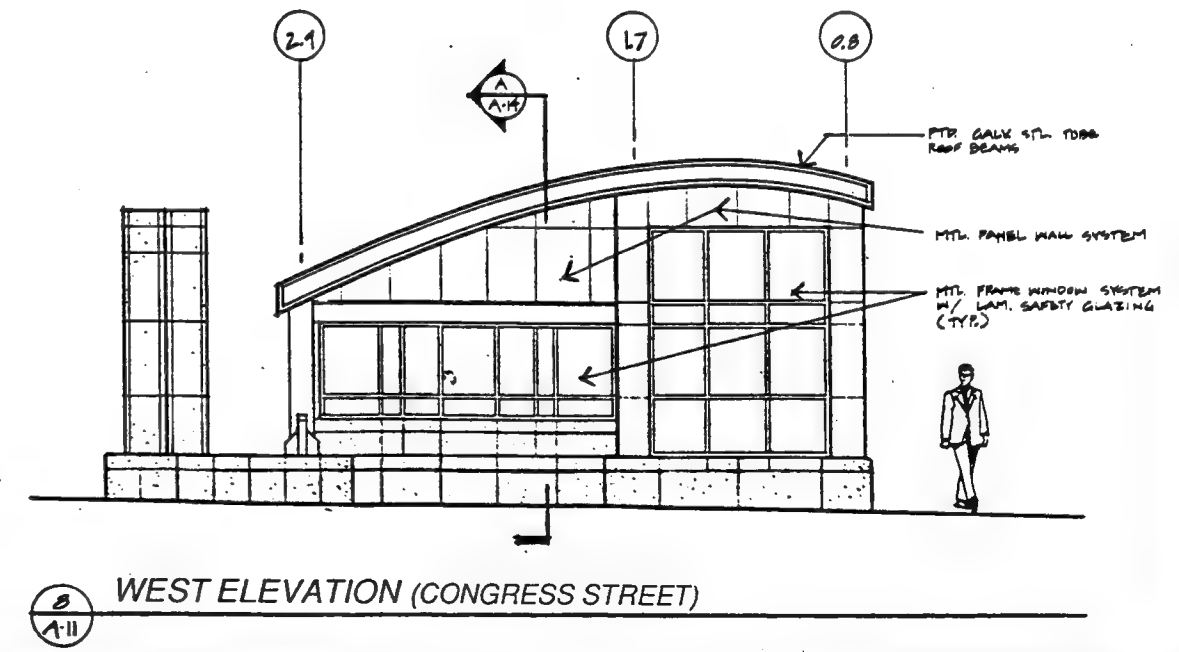
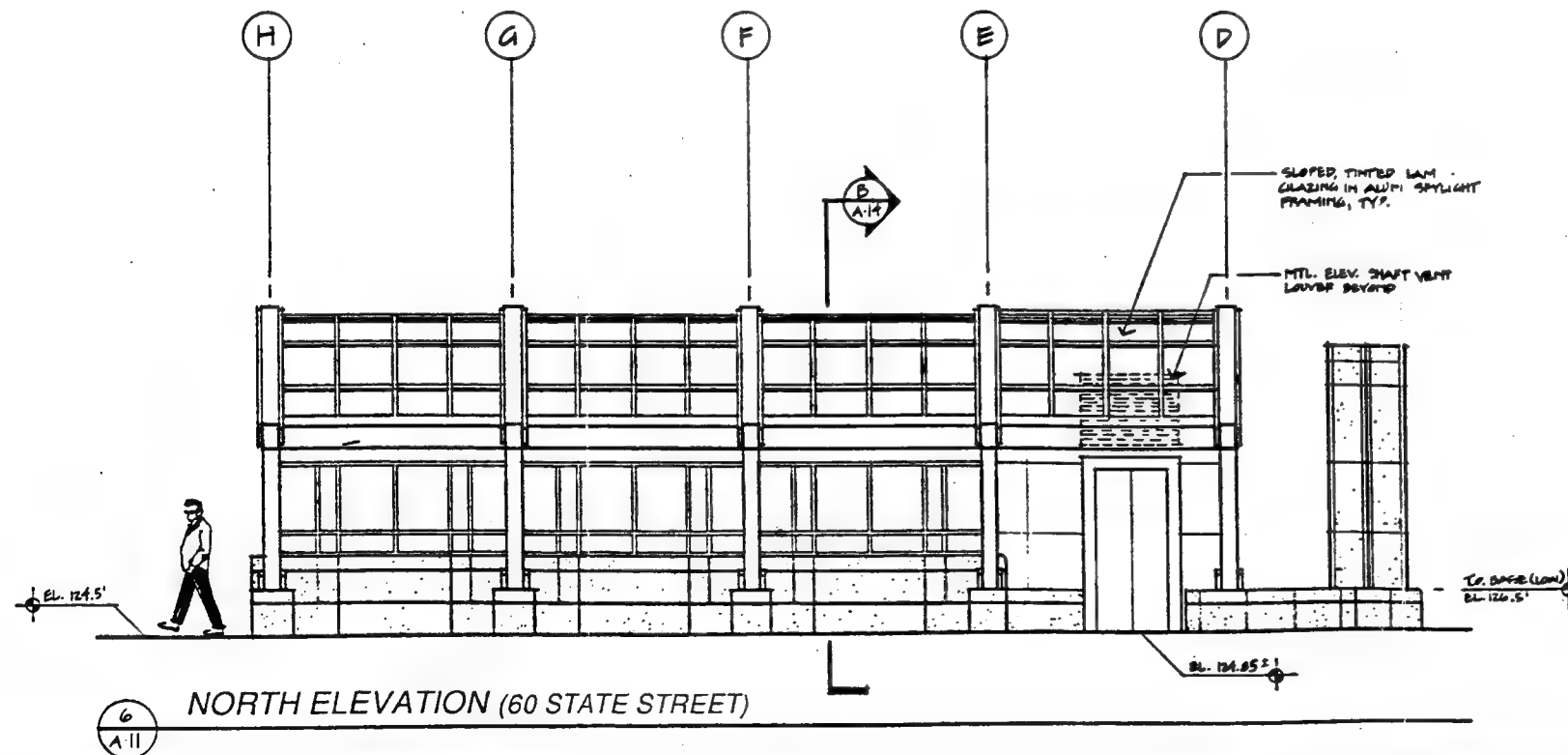
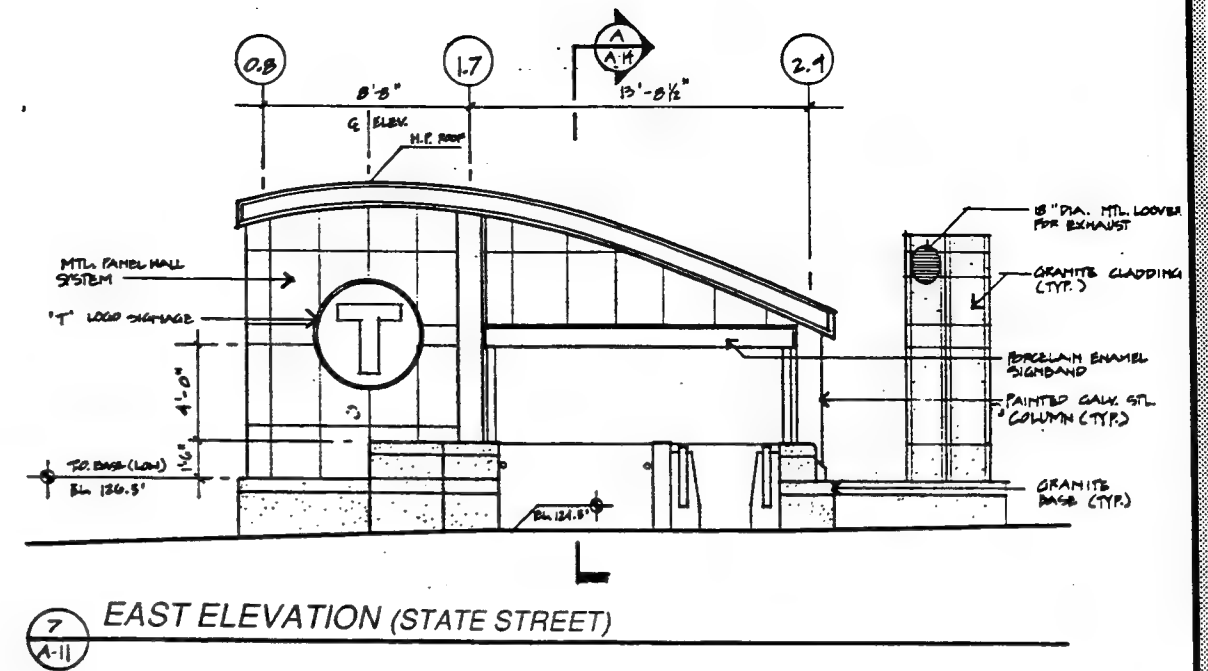
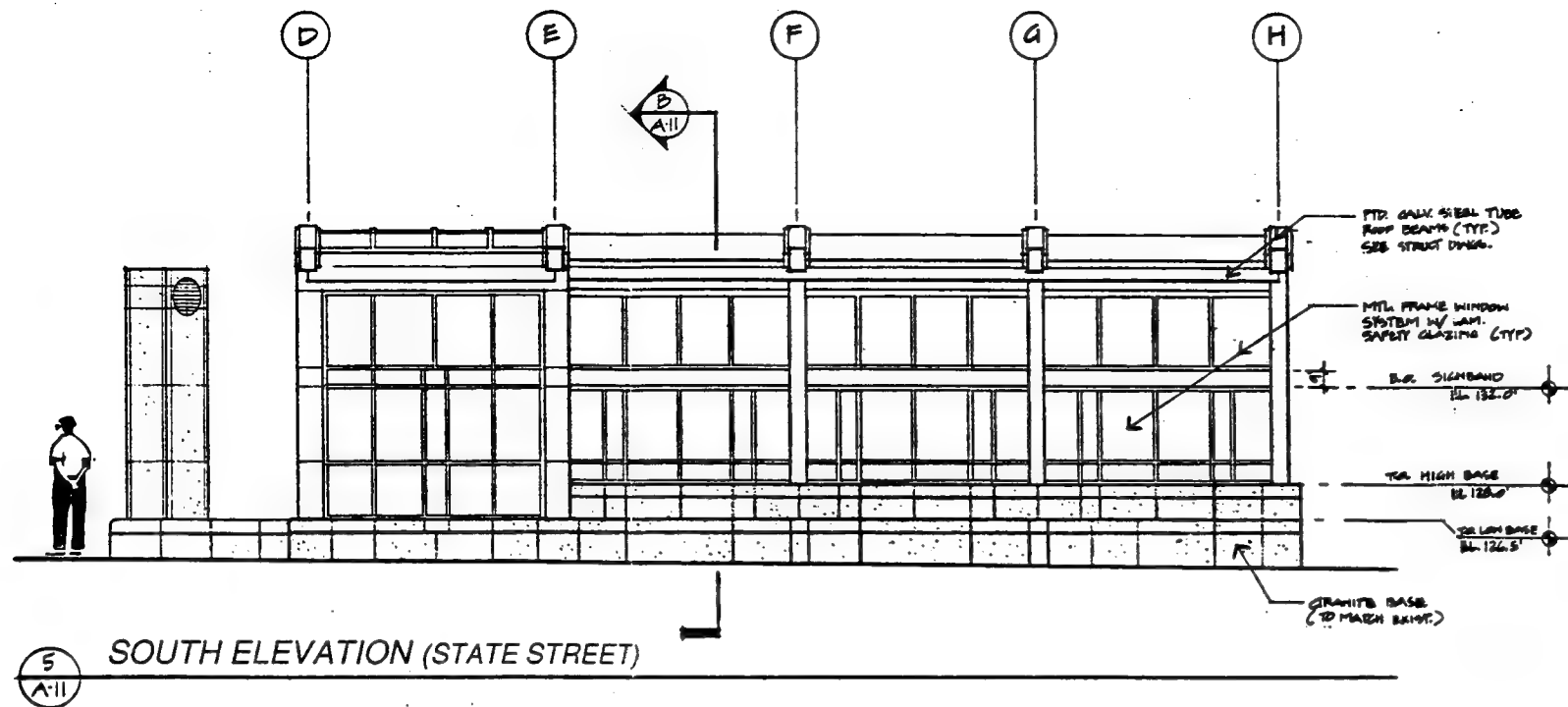
In a letter to the MHC dated June 4, 1992, the MBTA stated the reasons why the provision of open stairs is not an option at the new State headhouses. The Massachusetts Building Code in Article 8, Section 819.1 states that at exits, "exterior stairways and exit balconies in climates subject to snow and ice shall be protected to prevent accumulation of same." It also indicates in Article 8, Section 805.2 (Maintenance) that "all required means of egress components shall at all times be maintained in a safe and usable condition. All exterior stairways, fire escapes, egress balconies, and bridges shall be kept free of snow and ice".

The MBTA must maintain safe conditions for the riding public during winter snow and ice conditions. Adding stairs without an overhead covering will increase the potential for a hazardous walking surface. Once design resumes, the MBTA will be examining ways to minimize roof areas within the context of concerns expressed by the MHC and others. Refer to Section II for a description of alternative headhouse locations. The preferred headhouses at 53 and 60 State Streets do not require emergency egress stairs.



T Massachusetts Bay Transportation Authority
Blue Line Station Modernization FEIR

Figure III.1



Approximate Scale: 1 in. = 8 ft.

Source:
Domenech Hicks & Krockmalnic, Inc./Weidlinger Associates, Inc.,
State Station Exterior Kiosk Elevations Plan, undated.

STATE STATION 60 STATE KIOSK ELEVATIONS

Massachusetts Bay Transportation Authority
Blue Line Station Modernization FEIR

Figure III.2

10) **Metropolitan Area Planning Council**

Subject: Level Of Coordination With The Central Artery Tunnel Project

The MBTA is committed to continue coordinating this Project with the Central Artery Tunnel Project. The temporary Blue Line Wonderland, Revere Beach, Beachmont, and Suffolk Downs Station closures are being coordinated between two projects -- the Scarpa (Saratoga Street) Bridge reconstruction/ Saratoga/ Bennington Street intersection improvements and the Logan Airport East Boston CA/T project construction. The MBTA understands that the temporary station shutdown construction period needs to be kept within the narrow available 'window of opportunity'. The MBTA meets regularly with the CA/T project team to address coordination aspects of our projects.

11) **Metropolitan Area Planning Council**

Subject: Express Train Services Between Beverly Depot And Downtown Boston

The suggested increase in express commuter rail services will not accomplish the objective of encouraging Blue Line users -- who are typically located in communities south of Beverly -- to use alternative available commuter rail services. This type of service encourages persons located outside of the Blue Line service area to use MBTA commuter rail services. The MBTA believes that the highest mitigation priority should be given to providing good replacement services for existing and potential riders within the Blue Line service area.

The MBTA proposes to attract Blue Line riders to alternative services by keeping the Lynn garage free and by marketing the commuter rail and bus services which

can be accessed via the Lynn garage. The MBTA will coordinate with the Massachusetts Highway Department (MHD) and the Metropolitan District Commission (MDC) to add temporary Lynn garage trailblazing signs to its access routes during the shuttle bus period.

Refer to Sections II.3 and IV.1.C for a summary of proposed mitigation measures which the MBTA believes will attract current and potential Blue Line service area riders to alternative commuter rail service.

12) **Metropolitan Area Planning Council**

Subject: New Train Services Between Salem And Boston

While unable to increase train services between Salem and Boston due to financial constraints, the MBTA is studying this proposal in its on-going *North Shore Transportation Study* for possible long term implementation. This study is expected to be completed in the near future. The MBTA will market existing alternative rapid transit, bus, and commuter rail services during the shuttle bus program. Existing commuter rail and improved bus services at the Lynn Station/garage will be marketed during the shuttle bus program and the MBTA will keep the garage free to users.

13) **Metropolitan Area Planning Council**

Subject: Reduced Fares For Commuter Rail Services

Due to financial constraints and passenger equity issues, the MBTA is unable to reduce commuter rail fares during the one-year Blue Line shuttle bus program. However, as noted in the DEIR, the MBTA has an array of alternative public transportation services available for Blue Line riders who choose not to use the

shuttle bus service. Refer to Comment Responses 11 and 12.

14) Metropolitan Area Planning Council

Subject: Bowdoin Station Closure and Blue Line/Red Line Connector

The MBTA concurs with both aspects of this proposal. The Bowdoin Station will not be closed until six-car trains are placed into service and the MBTA will review the priority of the Red/Blue Line Connector within the context of other potential service improvements on an annual basis. See also response to Comment 5.

III.3 CITY LETTERS AND RESPONSES

**15) City of Revere, Frank Stringi,
Department of Planning and
Community Development Director**

Subject: Coordination With City Of Revere
on Beachmont Station Tower

The MBTA and its station architects met with several key City of Revere representatives on July 8, 1993 to provide the rationale for the proposed Beachmont Station tower. At that meeting, City officials agreed that the design as proposed was acceptable. The MBTA commits to closely coordinate follow-up design and construction activities for the Beachmont and Revere Beach Stations with the City of Revere throughout the Blue Line Station Modernization Project.

**16) City of Revere, Frank Stringi,
Department of Planning and
Community Development Director**

Subject: Direct Bus Shuttles From Lynn
Garage And Wonderland/ Increase Express
Bus Service

The MBTA will be increasing service on the 440 series bus routes and will be increasing commuter rail use incentives from the Lynn garage during the temporary shuttle bus program. Refer to Sections II and IV of this document for a description of these proposed temporary measures.

**17) City of Boston, Public Facilities
Department, Mary Nee Director**

Subject: Design Phase Schedule for
Government Center Station and Pedestrian
Study

The MBTA cannot commit to a firm design schedule for the Government Center Station at this time. The MBTA does commit however (refer to Section IV of this document) to close coordination of the station headhouse designs with the Public Facilities Department and other City agencies.

On the basis of the proposed construction schedule for the station, and the Comments received on the DEIR, the Government Center Station design phase may require up to three years to obtain necessary local approvals. Since construction on the new Government Center Station Blue Line headhouses is not scheduled to begin until late in 1997, the design phase must resume no later than 1994 so that construction contracts can be approved and advertised.

As recommended, Government Center and State Station pedestrian studies were conducted; see Sections I.4 and II.1 of this FEIR.

**18) City of Boston, Public Facilities
Department, Mary Nee Director**

*Subject: Proposed City Hall Plaza
Headhouse*

The MBTA commits to resolve the concerns of the Public Facilities Department when design on the Government Center Station headhouses resumes. Refer to Section IV.2.B of this document for a discussion of MBTA maintenance commitments regarding the proposed new headhouses and Section II for a discussion of headhouse alternatives. The MBTA will work closely with City agencies to design a headhouse which does fit well into its environment and strikes the best balance between function and form.

**19) City of Boston, Public Facilities
Department, Mary Nee Director**

*Subject: Existing Government Center
Station And Headhouse Maintenance*

The MBTA has already begun the process of working with the City Public Facilities and Real Property Departments to resolve existing headhouse maintenance issues. Refer to Section IV.2.B for specific commitments to existing and future headhouse maintenance activities.

**20) City of Boston, Public Facilities
Department, Mary Nee Director**

Subject: Station Security

Passenger security is one of the MBTA's highest priorities. The MBTA's preferred headhouse locations on City Hall Plaza and Two Center Plaza incorporate steps, escalators and elevators within direct view of a new collector booth at the Blue Line mezzanine level to improve passenger security. The MBTA also proposes a concession area at the Blue Line mezzanine level to add activities

which will increase passenger security and provide passenger amenities. The MBTA notes that an alternative headhouse location closer to the JFK building, suggested by some City agencies, requires the construction of a minimum 100' long pedestrian tunnel which would present undesirable security problems. Similar to its headhouse maintenance procedures, the MBTA regularly updates its passenger security procedures. MBTA police will be assigned to patrol new headhouses on a regular basis relative to other systemwide passenger security needs.

**21) City of Boston, Public Facilities
Department, Mary Nee Director**

*Subject: Coordination With Other City Hall
Plaza Projects*

The MBTA is and will be coordinating the design of the new Government Center Station headhouses with the City's other City Hall Plaza projects. The Congress Street Bridge project does not directly conflict with this project. The City Hall Plaza Repair Project, however, must and will be closely coordinated with the design and construction schedule for the proposed new Government Center headhouses. Both the City and MBTA have time to develop appropriate design coordination parameters for the proposed new headhouses, since the Government Center headhouses are not scheduled for construction until 1997.

**22) City of Boston, The Environment
Department, Lorraine M. Downey,
Director**

*Subject: Pedestrian Flow At Proposed State
Station Headhouses*

Sections I.4 and II.1 of this FEIR document a 1993 pedestrian flow study in the State Station area. The MBTA concludes that while pedestrian flow will be somewhat impeded for brief periods

during construction of the State Station improvements, post-construction pedestrian flows with the MBTA's preferred headhouse locations will actually improve when compared to the No-Build Alternative. Video observations at Congress and State Streets indicate that the major Congress Street pedestrian crossings at the intersection of Congress and State Streets will diminish. Many pedestrians under existing conditions going to and from the Old State House headhouse will be diverted to the new headhouse locations. Because the analysis indicates that conditions will improve compared to the No-Build Alternative, it is unnecessary for the MBTA to consider the suggestion to obtain a pedestrian easement for use of the private sidewalk in front of 60 State Street.

- 23) City of Boston, The Environment Department, Lorraine M. Downey, Director

Subject: State Station Headhouse Alternatives/ADA Compliance

Section II.1.E of this FEIR documents a review of alternative State Station headhouse locations. The MBTA concluded that its preferred State Station headhouse locations provide the best balance between the need to 1) make State Station comply with ADA requirements and 2) accommodate the complex and historical urban environment of the State Station area. (See response to Comment 9). State Station is the Blue Line's largest downtown passenger origin/destination point. The MBTA does not seek to compromise its commitment to fully comply with ADA accessibility requirements at this station.

- 24) City of Boston, The Environment Department, Lorraine M. Downey, Director

Subject: 53 State Street Alternative Designs

See response to Comment 9 related to open stairwells. The MBTA has suspended design activities related to the State Station pending approval of this FEIR. As indicated in Section IV.1.H of this FEIR, the MBTA is committed to working closely with the MHC and City agencies, including the Environment Department, to address unresolved design consistency issues related to the proposed State Station headhouses.

- 25) City of Boston, The Environment Department, Lorraine M. Downey, Director

Subject: Bowdoin Station Pedestrian Impacts

The MBTA recognizes that the 78% of Bowdoin passengers will need to walk further to access the new Government Center headhouses while only 22% will have a shorter walk. However, the alternative of keeping the Bowdoin Station open with six-car trains running presents serious safety and operational cost concerns to the MBTA. As indicated in the response to Comment 5, alternative MBTA and other public transportation services are available to accommodate the longest pedestrian trips from the Massachusetts General Hospital area which would be required due to the Bowdoin Station closure.

- 26) City of Boston, The Environment Department, Lorraine M. Downey, Director

Subject: Red-Blue Line Connector Priority

As indicated in Section IV - Mitigation Commitments, the MBTA commits to reviewing the priority for the Red-Blue Line Connector on an annual basis.

- 27) **City of Boston, The Environment
Department, Lorraine M. Downey,
Director**

Subject: Station Maintenance Commitments

The MBTA is complying with this request. Refer to Section IV.2.B for the details on commitments to station headhouse maintenance procedures.

- 28) **City of Boston, The Environment
Department, Lorraine M. Downey,
Director**

Subject: Existing Government Center
Headhouse

The MBTA will address improvements to the existing Government Center headhouse under the Green Line Station Modernization program which will make the Green Line comply with ADA requirements.

- 29) **City of Boston, The Environment
Department, Lorraine M. Downey,
Director**

Subject: Relocation Of Proposed Blue Line
Headhouse Towards The JFK Building

Refer to Section II.1.C for a discussion of this suggestion. The MBTA finds that a proposed entrance closer to the JFK building has significant cost and passenger security implications which make it an undesirable option.

- 30) **City of Boston, The Environment
Department, Lorraine M. Downey,
Director**

Subject: LOS Degradation Along The
Shuttle Bus Corridor

The analysis was done to conform to current EIR traffic analysis guidelines. Overall LOS is the relevant indicator.

The MBTA does propose to reduce peak hour bus impacts by lowering bus trips by 15% (i.e., from 40 bus trips to 34 bus trips in each direction) at the outset of the shuttle bus program. This will slightly improve traffic operations during the shuttle bus program.

- 31) **City of Boston, The Environment
Department, Lorraine M. Downey,
Director**

Subject: Weather Service Disruptions

The MBTA does not concur with this comment. A problem with one shuttle bus does not affect service along the corridor. Weather problems need to be so severe to affect the shuttle bus service that the MBTA Blue Line park-ride passengers will also be affected. MBTA Bus Operations is responsible for ensuring that adequate services will be provided at all times. Emergency planning is an on-going activity within the MBTA Bus Operations. The MBTA will work with the MDC and the cities of Boston and Revere to ensure that the shuttle bus route receives the highest priority for plowing during winter storms.

- 32) **City of Boston, The Environment
Department, Lorraine M. Downey,
Director**

Subject: Coordination And Commitment To
Keep Affected Riders Informed

The MBTA agrees with this comment and is committed to accomplishing this objective.

- 33) **City of Boston, The Environment Department, Lorraine M. Downey, Director**

Subject: Increase Use Of Lynn Garage/Station

The MBTA's proposed mitigation measures to increase the use of this station are discussed in Sections II.3 and IV.1.C of this FEIR.

- 34) **City of Boston, The Environment Department, Lorraine M. Downey, Director**

Subject: Noise Abatement

See response to Comment 2. The MBTA has committed \$8 million of the Blue Line construction funds to implement noise abatement measures and is beginning a systemwide noise abatement study which will identify the most cost effective ways to use these funds along the Blue Line.

- 35) **City of Boston, The Environment Department, Lorraine M. Downey, Director**

Subject: Noise Standards

The cited error in noise standards is addressed in Section I.7 of this FEIR.

- 36) **City of Boston, Boston Water and Sewer Commission (BWSC)**

Subject: Utility Impacts

Refer to Section IV.1.J for the MBTA's commitment regarding the coordination of utility impacts with affected utility companies and our commitment to maintain service at all times on affected utilities related to all stations addressed in this EIR.

Potential Bowdoin, Government Center, and State Station utility impacts were

discussed at length with the BWSC during the *State, Government Center and Bowdoin Stations Schematic Design Report - Volumes I-IV* (November, 1989) which is available for review at the MBTA.

Station architect/engineers have coordinated preliminary station utility impacts for every Blue Line station with all potentially affected utility companies, including BWSC.

Final verification of potential utility conflicts at Bowdoin, State, Government Center, and Maverick Stations has not occurred. Specific resolution of each utility conflict is dependent upon final verification of existing utilities and building foundations as well as further definition of proposed station improvements which will be accomplished during the final design phase.

When the final design phase resumes at these stations, all affected utility providers will be contacted again concerning the design of the Project and potential utility impacts.

- 37) **City of Boston, Boston Water and Sewer Commission**

Subject: Orient Heights And Suffolk Downs Station Utility Impacts

According to JPA/Milne Architects and Engineers, the MBTA Station architects, above ground electric utility structures will be affected at Orient Heights and Suffolk Downs Stations. Minimal excavation is expected with both station improvement projects. Both Orient Heights Station and Suffolk Downs Station will produce minor increases in water consumption. Coordination with the Boston Water and Sewer Commission has begun and will continue since both stations require minor modifications to their water system infrastructures.

-
- 38) City of Boston, Boston
Redevelopment Authority, Paul
Reavis, Assistant Director for Design
and Engineering Services

Subject: Proposed Headhouse Locations

Refer to Comment responses 23, 24, and 29. Section II presents alternative headhouse locations for the State and Government Center Stations.

- 39) City of Boston, Boston
Redevelopment Authority, Paul
Reavis, Assistant Director for Design
and Engineering Services

Subject: Pedestrian Impacts

Refer to Comment responses 17, 22, and 25 for a discussion of pedestrian impacts at the downtown Boston stations. Sections I.4 and II.1 of this document address this issue in detail.

- 40) City of Boston, Boston
Redevelopment Authority, Paul
Reavis, Assistant Director for Design
and Engineering Services

Subject: Headhouse Studies

Refer to Comment responses 23, 24, and 29.

- 41) City of Boston, Boston
Redevelopment Authority, Paul
Reavis, Assistant Director for Design
and Engineering Services

Subject: Government Center Headhouse
Design/JFK Building Site Suggestion

The linear headhouse design recommendation will be considered when headhouse design studies resumes. See response to Comment 29.

- 42) City of Boston, Boston
Redevelopment Authority, Paul
Reavis, Assistant Director for Design
and Engineering Services

Subject: State Headhouse Studies

Again refer to Comment responses 23, 24, and 29 and Section II of this report.

- 43) City of Boston, Boston
Redevelopment Authority, Paul
Reavis, Assistant Director for Design
and Engineering Services

Subject: Headhouse Design Coordination

The MBTA agrees with the Comment and is commits to work with City agencies and address the concerns.

- 44) City of Boston, Boston
Redevelopment Authority, Paul
Reavis, Assistant Director for Design
and Engineering Services

Subject: Headhouse Perspective Studies

The MBTA agrees with the Comment. Perspective sketches, unavailable at this time, will be provided as design progresses on the State and Government Center headhouses.

- 45) City of Boston, Boston
Redevelopment Authority, Paul
Reavis, Assistant Director for Design
and Engineering Services

Subject: Headhouse Visual Intrusion

The MBTA agrees and will incorporate the suggestion in future design submissions to the maximum extent possible within State building code constraints.

- 46) City of Boston, Boston
Redevelopment Authority, Paul
Reavis, Assistant Director for Design
and Engineering Services

Subject: Re-use of Old Boston Subway

The proposed new entrances at Government Center will reuse part of the old Boston subway system -- a mezzanine access area -- in operation prior to the Government Center Urban Renewal Project. The MBTA will highlight historical aspects of Project impact areas in station artwork, as done on Red, Orange, and Green Line Station Modernization Projects.

- 47) City of Boston, Boston
Redevelopment Authority, Paul
Reavis, Assistant Director for Design
and Engineering Services

Subject: Historical Resource Impacts

Refer to Comment responses 8 and 9.

- 48) City of Boston, Boston
Redevelopment Authority, Paul
Reavis, Assistant Director for Design
and Engineering Services

Subject: Utility Impacts

Refer to Comment responses 5 and 25, and 26.

- 49) City of Boston, Boston
Redevelopment Authority, Paul
Reavis, Assistant Director for Design
and Engineering Services

Subject: Government Center Utility Impacts

The MBTA will resume the design of the Government Center headhouses upon approval of this FEIR and will advance resolution of the utility issues as soon as possible thereafter.

- 50) City of Boston, Boston
Redevelopment Authority, Paul
Reavis, Assistant Director for Design
and Engineering Services

Subject: Congress Street Pedestrian Bridge

The MBTA has not made the referenced commitment to allocate funds to the proposed Congress Street pedestrian bridge, but will continue to discuss the issue with the BRA.. The proposed project does not have an impact on the pedestrian bridge

- 51) City of Boston, Boston
Redevelopment Authority, Paul
Reavis, Assistant Director for Design
and Engineering Services

Subject: Contractor Noise Measurements

The MBTA agrees and has incorporated the suggestion to have station construction contractors perform noise measurements in this document.

- 52) City of Boston, Boston
Redevelopment Authority, Paul
Reavis, Assistant Director for Design
and Engineering Services

Subject: Construction Management Plans

The MBTA agrees to submit and coordinate construction management plans for the Project to the City agencies prior to initiation of construction work.

- 53) City of Boston, Boston
Redevelopment Authority, Paul
Reavis, Assistant Director for Design
and Engineering Services

Subject: State Station Area Construction Pedestrian Impacts

These concerns are addressed in Sections II.1 and IV.1.E of this FEIR.

- 54) City of Boston, Boston
Redevelopment Authority, Paul
Reavis, Assistant Director for Design
and Engineering Services

Subject: Weather Related Emergency Plans

The MBTA is a service-oriented agency which is constantly dealing with emergency situations, some weather related, others related to equipment failures. The MBTA's Bus Operations Department is responsible for ensuring that our passengers are provided timely replacement services in emergency situations. Refer to Comment response 31 for a further discussion of this issue.

- 55) City of Boston, Boston
Redevelopment Authority, Paul
Reavis, Assistant Director for Design
and Engineering Services

Subject: Bennington Street LOS Concern

The MBTA commits not to begin the shuttle bus service until the intersection and Scarpa bridge and related improvements at Saratoga and Bennington Street have been substantially completed and are open to traffic. The analysis indicates that this intersection and all others along the corridor will operate at an acceptable level of service during the shuttle bus program. As noted in this FEIR, a peak level of 34 bus trips per hour is proposed at the outset of the shuttle bus program. The MBTA will improve its other alternative feeder bus and commuter rail services during the shuttle bus program.

- 56) City of Boston, Boston
Redevelopment Authority, Paul
Reavis, Assistant Director for Design
and Engineering Services

Subject: Orient Heights Impacts

The MBTA commitments to minimize adverse impacts on the Orient Heights Station area are outlined in Section IV.C.1.

- 57) City of Boston, Boston
Redevelopment Authority, Paul
Reavis, Assistant Director for Design
and Engineering Services

Subject: Noise Mitigation

Refer to Comment responses 1 and 2.

- 58) City of Boston, Boston
Transportation Department, Rina
Cutler, Commissioner

Subject: Bowdoin Station Passengers

Of the $\pm 2,100$ total daily Bowdoin Station passengers, approximately 485 are destined for MGH according to the July, 1992 survey conducted for the DEIR. Of the 485 daily MGH passengers, less than 60 use the station 3 days or less per week. These 60 passengers (less than 3 % of the total daily Bowdoin Station ridership) represent the group of MGH-destined passengers most likely to be elderly. Therefore, the vast majority of Bowdoin passengers destined for MGH are likely to be workers, as opposed to elderly passengers. Refer to Comment responses 5 and 25 for a further discussion of this issue.

- 59) City of Boston, Boston
Transportation Department, Rina
Cutler, Commissioner

Subject: Blue Line- Red Line Connector

Refer to Comment response 26.

- 60) City of Boston, Boston
Transportation Department, Rina
Cutler, Commissioner

Subject: Headhouse Design Coordination

Refer to Comment response 21.

- 61) City of Boston, Boston
Transportation Department, Rina
Cutler, Commissioner

Subject: Headhouse Maintenance
Commitments

Refer to Comment response 19.

- 62) City of Boston, Boston
Transportation Department, Rina
Cutler, Commissioner

Subject: Pedestrian Movements

Refer to Comment responses 17, 22 and
25.

- 63) City of Boston, Boston
Transportation Department, Rina
Cutler, Commissioner

Subject: JFK Building Area Headhouse
Alternative

Refer to Comment response 29.

- 64) City of Boston, Boston
Transportation Department, Rina
Cutler, Commissioner

Subject: Shuttle Bus Traffic Impacts Orient
Heights Station Area Impacts

On behalf of the MBTA, the Central Transportation Planning Staff (CTPS) conducted an air quality analysis related to the temporary shuttle bus operation assuming 40 additional buses per hour in each direction and found that the operation will have a relatively small impact on air quality. At this time, the MBTA proposes to provide 15 % fewer peak period buses during this program to reduce peak period traffic impacts. The shuttle bus operation traffic analysis presented in the DEIR indicated that on typical weekdays, traffic operational problems would not occur along the corridor with 40 bus trips per hour; 34 bus trips per hour will produce slightly better traffic operations than evaluated in the DEIR.

About half the shuttle buses are proposed to be express between Wonderland and Orient Heights Station, thereby reducing the impact of buses on general traffic flow. MBTA personnel will be at every affected Blue Line station and police details will be provided at key locations along the entire shuttle bus corridor to address service problems which may occur immediately.

The reference to the passenger survey should not be taken to represent that a 1,000 Blue Line riders will drive during the morning 2 hour peak period. As an opinion survey, the MBTA believes that the vast majority of persons who indicated they will drive to their destinations do not have that option readily available to them. Refer to Comment response 7 for a further discussion of this issue.

The MBTA concurs with the request regarding the Orient Heights Station commuter parking lot spaces and will allow passenger pick-ups at the commuter parking lot between 3-6 PM. Refer to Section IV.1.C for a full discussion of MBTA commitments to mitigate impacts in the area of Orient Heights Station.

- 65) **City of Boston, Boston**
Transportation Department, Rina
Cutler, Commissioner

Subject: Lynn Garage Use Incentives

The MBTA agrees with this comment. Refer to Comment response 16.

- 66) **City of Boston, Boston**
Transportation Department, Rina
Cutler, Commissioner

Subject: Enforcement Impacts

This Comment is addressed in Section IV.1.C.

- 67) **City of Boston, Boston**
Transportation Department, Rina
Cutler, Commissioner

Subject: Pedestrian Access

The MBTA plans on keeping existing pedestrian ways under their direct control open during the shuttle bus program.

- 68) **City of Boston, Boston**
Transportation Department, Rina
Cutler, Commissioner

Subject: Traffic Safety

The MBTA is very concerned about traffic safety and the safety of its passengers. The MBTA commits to provide police details to address street enforcement activities during the shuttle bus program. Refer to Section IV.1.C for details on traffic safety commitments.

The study of shuttle bus traffic impacts did not indicate there were any locations affected by the shuttle buses which warranted the installation of new traffic signals.

- 69) **City of Boston, Boston**
Transportation Department, Rina
Cutler, Commissioner

Subject: Saratoga and Bennington Street
Signal Controller

Shuttle buses will not be traveling through this signal which is located downstream of the Bennington Street busway. This intersection is being improved as a separate project described in the DEIR. The MBTA is separately studying post-station modernization bus circulation options at Orient Heights Station. Should the recommended bus circulation scheme require modifications to the signal of Saratoga and Bennington Streets, the MBTA will address potential signal control modifications at that time.

- 70) **City of Boston, Boston**
Transportation Department, Rina
Cutler, Commissioner

Subject: Traffic Counts at Saratoga and
Bennington Streets

These counts were taken and were provided on Figure 27 of the DEIR on Page II-31 and in Technical Appendix 5 - Traffic.

- 71) **City of Boston, Boston**
Transportation Department, Rina
Cutler, Commissioner

Subject: Coordination of Traffic Sequencing
Plans

When design resumes, the MBTA will prepare coordinated traffic sequencing plans related to overlapping elements of construction sequencing at the

Government Center, State, and Aquarium Stations for review and approval by the BTB. The MBTA also will coordinate all construction traffic sequencing with the City's Central Artery/Tunnel Project Team.

- 72) **City of Boston, Boston
Transportation Department, Rina
Cutler, Commissioner**

Subject: Congress Street Reduction to
One Lane at State Street

When design resumes, the MBTA will review alternative construction possibilities for the State Station Phase 2 construction sequence in response this comment. As indicated in Section IV.1.E, the MBTA commits to obtaining the approval of the BTB on all traffic sequencing plans prepared for City of Boston Blue Line stations prior to actual construction.

- 73) **City of Boston, Boston
Transportation Department, Rina
Cutler, Commissioner**

Subject: Computer Communications Cable
Relocation

Refer to Section IV.1.J - Utility Coordination /Maintenance of Service Commitment.

- 74) **City of Boston, Boston
Transportation Department, Rina
Cutler, Commissioner**

Subject: Parking Availability

Refer to IV.2.C - Provide Park-Ride Improvements As Needed. The MDC parking spaces referred to are the most remote spaces from Wonderland Station (involving minimum walks of 1,000 to 2,000 feet to and from station platforms). The MBTA considers this area to be an overflow area which will be pursued for

reopening if alternative park-ride options are exhausted.

- 75) **City of Boston, Boston
Transportation Department, Rina
Cutler, Commissioner**

Subject: Park-Ride Improvements Program

Refer to IV.2.C - Provide Park-Ride Improvements As Needed.

- 76) **City of Boston, Boston
Transportation Department, Rina
Cutler, Commissioner**

Subject: Noise Impacts

Refer to responses to Comments 1 and 2.

- 77) **City of Boston, Boston
Transportation Department, Rina
Cutler, Commissioner**

Subject: Downtown Station Impacts,
Construction Staging, Parking Availability,
and Shuttle Bus Operations

Refer to Sections I, II, and IV of this FEIR.

- 78) **City of Boston, Real Property
Department, Marie Turley, Assistant
Commissioner**

Subject: Maintenance Issues and
Commitments

Refer to Comment responses 18, 19, and 27.

- 79) **City of Boston, Real Property Department, Marie Turley, Assistant Commissioner**

Subject: Alternative Headhouse Locations

Refer to Comment responses 18 and 29.

III.4 PRIVATE GROUP AND CITIZEN LETTERS AND RESPONSES

- 80) **Boston Area Bicycle Coalition, John Allen, Board Member**

Subject: Bicycle Facilities

The MBTA will comply with this suggestion.

- 81) **Gail Miller, Private Citizen**

Subject: Bennington Street Traffic

It is not clear what construction activities are recommended to be suspended in this comment. The MBTA already commits not to conduct construction activities during nighttime hours of 7 PM to 7 AM in the Orient Heights area. The MBTA also commits that Orient Heights Station reconstruction activities will not be permitted to interfere with morning or evening peak period traffic on Bennington Street.

As noted in the DEIR, a separate project is underway to reduce congestion on Bennington Street. The Frank Scarpa bridge is being widened and the intersection of Saratoga and Bennington Street is being improved. The construction of these improvements is to be substantially completed prior to initiation of the temporary shuttle bus program. The MBTA also commits to reducing the initial level of the temporary shuttle bus program by 15 % from that proposed in the DEIR to reduce bus

traffic impacts on Bennington Street. Refer to Section IV.1.C for details on the modifications to the proposed shuttle bus period program described in the DEIR.

- 82) **Gail Miller, Private Citizen**

Subject: Commuter Parking Around Orient Heights

Refer to Section IV.1.C for a description of MBTA commitments to improve alternative MBTA options for Blue Line commuters during the temporary shuttle bus program.

- 83) **Gail Miller, Private Citizen**

Subject: Kiss and Drop

Refer to Section IV.1.C for a description of MBTA commitments to mitigation in the Orient Heights Station area, including Figure IV.1 for an illustration of the proposed Orient Heights Station area and kiss-drop provisions during the shuttle bus program.

- 84) **Gail Miller, Private Citizen**

Subject: Parking for the Disabled

The MBTA will comply with this request by allocating the closest future commuter parking spaces to the station as handicapped spaces in compliance with local and state requirements. During the shuttle program the most convenient drop-off space will be designated as a handicapped parking space.

- 85) **Private Group, Point of Pines Beach Association, Revere., Sheldon Kovitz, President**

Subject: Bowdoin Station

The MBTA has reviewed the suggested option. Although thoughtful, the MBTA has concluded it represents a cumbersome

and potentially unsafe way to handle the problem. Refer to Comment 5 for further discussion of this issue.

- 86) **Private Group, Point of Pines Beach Association, Revere., Sheldon Kovitz, President**

Subject: Government Center Headhouses and Platform Crowding

The new Government Center Station headhouses will both be served by the same toll collector. Closure of the Bowdoin Station produces annual operational cost savings which will more than compensate for the additional toll collector.

The center Blue Line platform at Government Center will be larger than existing when the architectural wall is removed and the mezzanine level part of the Scollay Square Station is reused. The larger platform area will reduce Blue Line platform crowding, even with the added Bowdoin Station passengers who constitute a relatively small number of riders on trains during peak periods.

- 87) **Private Group, Point of Pines Beach Association, Revere., Sheldon Kovitz, President**

Subject: Proposed Wonderland Commuter Rail Station

The MBTA does not consider this proposal to be feasible. The proposed Wonderland commuter rail station is landlocked -- the MBTA does not even own an easement into this area. The environmental documentation, design, and construction of this proposal would be enormously expensive and would delay this Project for years.

- 88) **Private Group, Point of Pines Beach Association, Revere., Sheldon Kovitz, President**

Subject: Additional Commuter Rail Stops

Refer to Comment response 87; this suggestion is also infeasible within a reasonable time frame.

- 89) **Private Group, Point of Pines Beach Association, Revere., Sheldon Kovitz, President**

Subject: Proposal to Waive Parking Fee at Wonderland / Incentives to Increase Use of Lynn Garage

Refer to Comment response 7 for a discussion of the parking fee waiver suggestion. While the MBTA does not agree with the proposed waiver, at least at the outset of the program, the MBTA will encourage increased use of the Lynn Station/garage as indicated in Comment response 13.

- 90) **Private Group, Point of Pines Beach Association, Revere., Sheldon Kovitz, President**

Subject: Proposal to Provide Bus Service to Wood Island Station

This is a good suggestion which is being proposed in this FEIR. Refer to Sections II.3 and IV.1.C for a detailed description of the proposed alternative 440 series bus route services.

- 91) **Private Group, Point of Pines Beach Association, Revere., Sheldon Kovitz, President**

Subject: Proposal to Use Waldemar Avenue for Shuttle Bus Operations

This proposal is infeasible for the same reasons given for Comment responses 87 and 88. The right-of-way referred to is

not fully paved and would require an unnecessary delay and expenditure of public funds to create a temporary path between stations which is less direct than the proposed shuttle bus route and would have an impact on adjacent residences. The MBTA proposes to reduce impacts on Bennington Street by reducing the number of initial peak hour bus trips by 15 % compared to the DEIR and by offering improved alternative services and incentives to use alternative services.

- 92) **Private Group, Point of Pines Beach Association, Revere., Sheldon Kovitz, President**

Subject: Corrections to DEIR Figures

Errors to the base mapping contained in the DEIR are so noted. The map was presented to give an overview of the relative station locations and illustrate those stations which were being addressed in the DEIR and was the best available mapping to do so. None of the errors cited have any relevance to information presented in the DEIR. The most recently available USGS mapping was used in the original Notice of Project Change and to highlight the proposed shuttle bus routing in this FEIR.

- 93) **Private Group, Point of Pines Beach Association, Revere., Sheldon Kovitz, President**

Subject: Revere Beach Station On-Street Parking Regulations

Noted errors in on-street parking regulations have been corrected and the revised text is provided in Section I.5 of this FEIR. The noted on-street parking changes do not affect the traffic analyses contained in the DEIR which assumed two travel lanes during each peak hour. To be conservative, use of parking lanes for travel was not assumed in the analysis, even though on-street parking is restricted during certain periods and the

space becomes available for stopping a bus or making right turns.

- 94) **Private Group, Point of Pines Beach Association, Revere., Sheldon Kovitz, President**

Subject: Wonderland Drop-off Parking Area

The proposed drop-off lane in the existing Wonderland parking lot adjacent to Ocean Avenue will involve the temporary designation of 10 existing commuter parking spaces to '15-minute Live Parking'. Spaces designated will be located closest to the parking ticket booth and on the west edge of the existing parking area. The MBTA may adjust the number of designated drop-off/pick-up spaces during the program if the demand for drop-off/pick-up spaces increases or decreases during the one-year program.

- 95) **Private Group, Point of Pines Beach Association, Revere., Sheldon Kovitz, President**

Subject: Wonderland Station Sunday Train Schedule

MBTA train schedules are subject to change routinely and are affected by budgetary constraints. The current headway is actually closer to 11 minutes as indicated by the Comment, but the schedule cited in the DEIR was correct.

- 96) **Private Group, Point of Pines Beach Association, Revere., Sheldon Kovitz, President**

Subject: Commitment to Attract New Riders

The MBTA is committed to the principle of attracting new riders -- at all times. Without construction of the Blue Line Station Modernization Program, the MBTA cannot achieve this objective, let alone comply with CA/THT

Memorandum of Understanding
agreements, or ADA requirements.

**97) Private Group, Point of Pines Beach
Association, Revere., Sheldon Kovitz,
President**

Subject: Suggestion To Extend to Lynn
Garage And Construct A Third Or Fourth
Track

This suggestion is well beyond the scope of this EIR. It would delay this project for many years, substantially increase costs/environmental impacts, and require the total reconstruction of all Blue Line station platforms.

Recognizing there is a need to address the long-term viability of alternative North Shore transit services, the MBTA has undertaken a separate *North Shore Transportation Study*. This study addresses the possibility of a Blue Line extension to Lynn, as well as alternative modifications to commuter rail, light rail, and feeder bus services. It is expected to be completed in the near future.

**98) Private Group, Point of Pines Beach
Association, Revere., Sheldon Kovitz,
President**

Subject: Suggestion To Delay This Project
Until Lynn Extension and Rail Corridor
Widening Studies are completed

See Comment response 97. This is not a feasible suggestion if the MBTA is to comply with ADA and CA/THT requirements in a timely manner.

**99) Bennington Place Condominium
Association**

Subject: Noise Impacts of Six-Car Trains

The MBTA has undertaken a thorough assessment of the noise impacts associated with the proposed six-car

trains, the results of which are documented in Section IV.2 of the DEIR. The essence of the findings is that a 50 percent increase in capacity with six-car vs. four-car trains does not translate into a 50 percent increase in exposure to noise. Rather, the results of the noise assessment indicate that a 2 dbA increase is anticipated if the Blue Line is run exclusively with six-car trains in the future (see Tables 24, 25 & 26, Section IV.2 of the DEIR). It is expected, however, that six-car trains will initially be used only during peak demand periods. During the balance of the day, four-car trains will continue to be used.

**100) Bennington Place Condominium
Association**

Subject: Noise Mitigation

See response to Comments 1 and 2.

**101) Leo X. Callahan,
Private Citizen**

Subject: Noise Mitigation

See response to Comments 1 and 2.

**102) Mr. Richard D. Cazmay,
Private Citizen**

Subject: Blue Line Extension to Lynn

As noted in Comment Response 97, the MBTA has commissioned a study to evaluate the viability of various North Shore transit improvements, including the possibility of extending the Blue Line to Lynn. Although such an extension may provide long term traffic relief for the communities of Revere and East Boston, the Blue Line Station Modernization Project needs to be considered on its own merits, since its related improvements do not preclude further extension of the Blue Line.

During the proposed shuttle bus program, the MBTA will take several actions to attract regular North Shore commuters within the Blue Line service area to use existing commuter rail services or improved feeder bus services via the existing Lynn parking garage (see Section II.3 of this FEIR).

103) Mr. Richard D. Cazmay,
Private Citizen

Subject: Beachmont Station Design

The MBTA recognizes that from a vehicular traffic perspective, the intersection of Bennington Street, State Road and Winthrop Avenue is less than ideal. The DEIR traffic analysis indicates, however, that the intersection can accommodate the buses involved in the shuttle bus program without causing unacceptable traffic operations.

The Beachmont Station design is nearly ready for advertising. Redesign to accommodate a traffic-related improvement would produce a costly major delay to the overall Blue Line Station Modernization Project which is already on a very tight schedule. Geometric traffic improvements at this location would be less costly if they could be worked around the elevated railway section. Refer to Comment response 15 for a further discussion of this issue.

104) Mr. Richard D. Cazmay,
Private Citizen

Subject: Winthrop Avenue Bus Stop

The MBTA acknowledges that the proposed 'upon request' route diversion to the Beachmont park-ride lot during the temporary shuttle bus service may modestly impede vehicular flow on Winthrop Avenue. However, the construction of a bus bay in front of the park-ride lot, including the relocation of the existing sidewalk so as not to

adversely impact pedestrians does not appear to be warranted for a temporary shuttle bus program. This is particularly true given that approximately half of the shuttle buses will run as 'express' between Orient Heights and Wonderland. Therefore less than half of the shuttle buses have the potential to turn left at the intersection and stop at the Beachmont park-ride lot -- fewer than 16 buses during the afternoon peak hour. Few, if any, buses will be requested to turn left during much of the day. Requests for the diversion will mainly occur between 3 PM and 7 PM. If this diversion becomes a problem from an operational or schedule standpoints, the MBTA will simply eliminate it and provide all service along Bennington Street. A police detail will be present at all times during construction to assist with pedestrian crossings and help ensure smooth traffic operations at the Bennington Street intersections with Winthrop Avenue.

105) Mr. Richard D. Cazmay,
Private Citizen

Subject: Proposed Shuttle Bus Program Routing

The MBTA carefully evaluated all routing options prior to selecting the route proposed in the DEIR. The MBTA believes that the route, as proposed, offers the best service possible for its passengers with the least impacts on local communities. The route proposed is direct and uses arterial roadway facilities which can best accommodate the buses on a temporary basis. It has a good paved surface and will receive priority for snow removal. Paving Waldemar Avenue for temporary use does not appear to be feasible. It is currently a cul-de-sac street with densely developed residences on the east side. Its right-of-way also traverses a sensitive wetland area.

106) Mr. Richard D. Cazmay,
Private Citizen

Subject: Potential Parking Expansion at
the Beachmont Park-Ride Lot

The MBTA recognizes that the Beachmont Station area has some intermittent vehicular congestion today and that the additional vehicle trips associated with an expanded park-ride lot may exacerbate this condition. Therefore, the MBTA is now exploring other avenues to address the future parking demands for the Blue Line corridor (e.g., expanding parking capacity at Wonderland Station and increasing utilization of the existing Lynn garage). Refer to Section IV.2.C of this FEIR for a discussion of this issue.

107) Ms. Gail Miller,
Private Citizen

Subject: Orient Heights Station-
Winthrop Bus Circulation

Refer to response to Comment 6.

108) Ms. Gail Miller,
Private Citizen

Subject: Orient Heights Station- Local
On-Street Parking Restrictions

Please refer to Section IV.1.C of this report for a discussion of MBTA mitigation commitments regarding this issue.

109) Ms. Gail Miller,
Private Citizen

Subject: Need for Orient Heights to
Wonderland Shut-Down

The MBTA has thoroughly evaluated the service and construction options for modernization of the Orient Heights, Suffolk Downs, Beachmont, Revere

Beach and Wonderland Stations. The program option recommended in the DEIR is the option with the least overall impacts on Blue Line passengers, the communities of East Boston and Revere, and the environment. A detailed discussion of all options and associated impacts, as well as justification for the recommended option, can be found in Section III.2.A of the DEIR.

110) Ms. Gail Miller,
Private Citizen

Subject: Noise Mitigation

See response to Comments 1 and 2.

111) Mr. & Mrs. Hathaway,
Private Citizens

Subject: Noise Mitigation

See response to Comments 1 and 2.

112) Mr. James Salvaggio,
Private Citizen

Subject: Noise Mitigation

See response to Comments 1 and 2.

113) Mrs. Josephine Asci,
Private Citizen

Subject: Noise Mitigation

See response to Comments 1 and 2.

114) Ms. Jean Stanopoli,
Private Citizen

Subject: Noise Mitigation

See response to Comments 1 and 2.

115) Mr. James R. Donovan,
Private Citizen

Subject: Noise Mitigation

See response to Comments 1 and 2.

116) Ms. Sheila Mullen,
Private Citizen

Subject: Noise Mitigation

See response to Comments 1 and 2.

117) Citizen's Petition, submitted by:
Mr. Pasquale Capaldo &
Mr. Joseph Rocciolo,

Subject: Noise Mitigation

See response to Comments 1 and 2.

118) Ms. Agnes Kennedy,
Private Citizen

Subject: Noise Mitigation

See response to Comments 1 and 2.

119) Ms. Linda Celona,
Private Citizen

Subject: Noise Mitigation

See response to Comments 1 and 2.

120) Ms. Marie Barrasso,
Private Citizen

Subject: Noise Mitigation

See response to Comments 1 and 2.

121) Ms. Maria Di Libero,
Private Citizen

Subject: Noise Mitigation

See response to Comments 1 and 2.

122) Mr. Frank J. Quartarone,
Private Citizen

Subject: Noise Mitigation

See response to Comments 1 and 2.

123) Frank & Camille Truetanella,
Private Citizens

Subject: Noise Mitigation

See response to Comments 1 and 2.

124) Mr. Pasquale A. Capaldo,
Private Citizen

Subject: Noise Mitigation

See response to Comments 1 and 2.

125) Unsigned Comment Letter
from Residents of
719 Bennington St., E. Boston

Subject: Noise Mitigation

See response to Comments 1 and 2.

126) Ms. Anna Testa,
Private Citizen

Subject: Noise Mitigation

See response to Comments 1 and 2.

127) Ms. Jennie Pomfrey,
Ms. Angela Merlino
Private Citizens

Subject: Noise Impacts of Six-Car Trains

See response to Comment 101.

128) Ms. Marie Barrasso,
Private Citizen

Subject: Noise Mitigation

See response to Comments 1 and 2.

129) Unsigned Comment Letter
from Residents of
719 Bennington St., E. Boston

Subject: Noise Mitigation

See response to Comments 1 and 2.

130) Mr. John H. Collues,
Private Citizen

Subject: Noise Impacts of Six-Car Trains

See response to Comment 101.

131) Ms. Diane C. O'Hara,
Private Citizen

Subject: Noise Mitigation

See response to Comments 1 and 2.

132) Mrs. Frances Hafey,
Private Citizen

Subject: Noise Mitigation

See response to Comments 1 and 2.

133) DePaole family,
Private Citizens

Subject: Noise Mitigation

See response to Comments 1 and 2.

134) Mrs. Renee Finn,
Private Citizen

Subject: Noise Mitigation

See response to Comments 1 and 2.

135) Citizen's Petition,
Barnes Avenue Residents

Subject: Noise Impacts of Six-Car Trains

See response to Comments 1,2, and 101.

136) Citizen's Petition,
Barnes Avenue Residents

Subject: Air Quality Impacts Associated
with Shuttle Bus Program

Although not scoped by MEPA to conduct an air quality analysis for the proposed temporary shuttle bus program, the MBTA requested that the Central Transportation Planning Staff (CTPS) perform an air quality analysis for that program. The analysis was conducted during November and December of 1991. The results were documented by CTPS and can be found in separate Technical Appendix 10 available on request from the MBTA. CTPS concluded that there would be an increase in CO emissions, but characterized the increase as 'relatively small'. NOTE: The analysis undertaken by CTPS in 1991 evaluated the potential impacts of 40 buses per hour on air quality. As stated in Section III.3 of this FEIR, the MBTA now proposes to initially run 34 bus trips in the peak periods, a 15 % decrease from the previously proposed service.

137) Citizen's Petition,
Barnes Avenue Residents

Subject: Orient Heights Station - Dust
Control During Construction

The MBTA is committed to minimizing the construction impacts associated with station reconstruction abutting residential neighborhoods. The MBTA will assure that all station contractors will comply with the dust control plans developed by the MBTA in conjunction with the Cities of Boston and Revere. An in-depth discussion of the MBTA commitments

regarding dust and other control measures (i.e., noise and rodents), can be found in Sections IV.1.D and IV.1.G of this FEIR.

138) Mr. Benito Tauro,
Private Citizen

Subject: Noise Mitigation

See response to Comments 1 and 2.

139) Mr. Mark Tauro,
Private Citizen

Subject: Noise Mitigation

See response to Comments 1 and 2.

140) Ms. Diana Gray,
Private Citizen

Subject: Air Quality Impacts Associated
with Shuttle Bus Program

See response to Comment 136.

141) Ms. Diana Gray,
Private Citizen

Subject: Noise Mitigation

See response to Comments 1 and 2.

142) Mr. & Mrs. Joseph Cioffi,
Private Citizens

Subject: Noise Mitigation

See response to Comments 1 and 2.

143) Mrs. Carolyn A. Bobrek,
Private Citizen

Subject: Noise Mitigation

See response to Comments 1 and 2.

144) Ms. Violento Capurro,
Private Citizen

Subject: Noise Mitigation

See response to Comments 1 and 2.

145) Ms. Jane Vieira,
Private Citizen

Subject: Noise Mitigation

See response to Comments 1 and 2.

146) Ms. Ida Scarnici,
Private Citizen

Subject: Noise Mitigation

See response to Comments 1 and 2.

147) Ms. Sharon A. Nelson,
Private Citizen

Subject: Noise Mitigation

See response to Comments 1 and 2.

148) Mr. & Mrs. Dominic Prochilo,
Private Citizens

Subject: Noise Mitigation

See response to Comments 1 and 2.

149) Unsigned Comment Letter,
from Residents of
96 Tomer Street, East Boston

Subject: Noise Mitigation

See response to Comments 1 and 2.

150) Ms. Maria Shea,
Private Citizen

Subject: Noise Mitigation

See response to Comments 1 and 2.

151) Mr. Charles Marcella,
Private Citizen

Subject: Noise Mitigation

See response to Comments 1 and 2.

**III.5 NEWS ACCOUNTS AND
PUBLIC MEETING MINUTES
(Attached)**



EMANUEL G. SERRA
REPRESENTATIVE
1ST SUFFOLK DISTRICT
TEL. (617) 560-9341

The Commonwealth of Massachusetts

HOUSE OF REPRESENTATIVES
STATE HOUSE, BOSTON 02133

ASSISTANT MAJORITY WHIP
ROOM 481 STATE HOUSE
TEL. (617) 722-2239
(617) 722-2239

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April 1, 1993

Trudy Cox, Secretary
Executive Office of Environmental Affairs
100 Cambridge Street
Boston, MA 02202

Attn: Nancy Baker

Re: Comment for EOEA#8772
Blue Line Modernization

Dear Ms. Baker:

It has come to my attention that in accordance with MEPA regulations the comment period for the recently published draft environmental impact report for the Blue Line Modernization Plan (EOEA# 8772) is currently open.

After review of the draft EIR, I am disappointed to learn that the proposals for the Blue Line do not include plans for the actual soundproofing of homes in areas which are impacted by the presence of the Massachusetts Bay Transportation Authority's Blue Line.

This specific soundproofing issue, raised over one year ago at a meeting in my office with the administration of the MBTA, has not even been considered as part of the Blue Line Modernization. I find it very disturbing that after an entire year, such a program is not even mentioned in the draft EIR. The MBTA has responded that they do not maintain a policy for the soundproofing of impacted homes. The MBTA is willing to consider sound-proofing measures through mechanical improvements and sound barriers. Certainly these proposals should be considered in addition to the soundproofing of homes.

The MBTA has agreed to commission a study on decreasing sound levels throughout the MBTA system. I would support such a study if the modernization program affected the MBTA system as a whole, however the modernization is aimed at the specific areas of Harbor View and Orient Heights among other areas. These areas will undoubtedly remain

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negatively impacted while the MBTA studies the problem "system wide". The negative environmental effects from MBTA operations suffered by these areas residents suggests that they do not have the time to await the results of such a study.

The residents of the aforementioned areas are currently exposed to perpetual noise at intolerable levels due to the proximity of the MBTA's Blue Line. This situation has been debilitating to the area's quality of life. Certainly the modernization project will be beneficial to this area. However, the MBTA must address those needs and desires of the residents which go beyond the direct impacts of the transportation system. Such a soundproofing program could mark the beginning of a new relationship among all concerned groups.

The MEPA regulations require the MBTA to include mitigation measures "intended to limit negative effects or engender positive effects during project construction and operation." 301 CMR 11.07 (7). Mitigation measures suggested by public comment must also be discussed in the EIR. As noted above, I proposed this program to the MBTA a year ago.

As you may recall, when the negative effects of Logan International Airport had reached similar levels, the Massachusetts Port Authority along with the FAA initiated an aggressive soundproofing program for those homes which were most heavily impacted. The results of this ongoing program are clearly positive. Citizens who found that living standards had been forced to unbearable levels can now peacefully remain in their homes and in their community.

The absence of a soundproofing program within the draft EIR suggests that while the MBTA is ready to expand its operations, it is unwilling to take into consideration the negative impacts placed upon the host communities. I feel that it is imperative for the MBTA to include a community acceptable soundproofing program acceptable to the community which could be implemented before or as part of any modernization project of the Blue Line.

If the Blue Line Modernization Project is to be successful, it must take into account the desires of the community which will be most heavily impacted. Therefore I respectfully ask that you consider withholding your approval of the EIR for the Blue Line Modernization Plan until such time as the MBTA is willing to take a closer look at an ever-present problem within their system.

I thank you for your consideration of this request.

Sincerely,

EMANUEL G. SERRA
ASSISTANT MAJORITY WHIP

EGS/ml

2



SENATOR ROBERT E. TRAVAGLINI
SUFFOLK AND MIDDLESEX
DISTRICT
ROOM 418A
TEL (617) 722-1634

COMMONWEALTH OF MASSACHUSETTS
MASSACHUSETTS SENATE
STATE HOUSE BOSTON 02133 1053

April 2, 1993

Trudy Cox, Secretary
Executive Office of Environmental Affairs
100 Cambridge Street
Boston, Massachusetts 02202

Re: Comment for EOE A #8772
Blue Line Modernization

Dear Secretary Cox:

I am writing to you relative to the recently published draft environmental impact report for the Blue Line Modernization Plan (EOEA #8772) and the public comment period which is currently open in accordance with NEPA regulations.

After reviewing the draft EIR, I am concerned that the proposals for the Blue Line do not include plans for the actual soundproofing of homes which are impacted by the presence of the Massachusetts Bay Transportation Authority's Blue Line.

This soundproofing issue was raised over a year ago in a meeting with Representative Gus Serra and has not been considered as part of the Blue Line Modernization by the MBTA. I find it very disturbing that the issue is not addressed in the draft EIR. The MBTA maintains that there is not a policy in place for the soundproofing of homes affected by the Blue Line modernization plan. The MBTA has stated that sound-proofing by way of mechanical improvements and sound barriers would be considered. I agree that these measures are important and should be implemented in addition to the soundproofing of homes.

The MBTA has agreed to commission a study on decreasing sound levels throughout the MBTA system. I would support such a study if the modernization program affected the MBTA system as a whole but the specific areas of Harbor View, Orient Heights and Maverick Square will undoubtedly remain negatively impacted. The current situation suggests that residents of the above-mentioned areas are

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COMMITTEES
LOCAL AFFAIRS
(CHAIRMAN)
GOVERNMENT REGULATIONS
(VICE CHAIRMAN)
TRANSPORTATION
HOUSING AND URBAN
DEVELOPMENT

already suffering negative environmental affects and do not have the time to await the results of this study.

These residents are currently exposed to perpetual noise at intolerable levels due to the proximity of the MBTA's Blue Line. The situation has been debilitating to the area's quality of life. Certainly, the modernization project will be beneficial to the area, however the MBTA must address the needs and desires of the residents which go beyond the direct impacts of the transportation system. Such a soundproofing program could mark the beginning of a new relationship among all the groups concerned.

When the negative effects of Logan International Airport had reached similar levels, the Massachusetts Port Authority along with the FAA initiated an aggressive soundproofing program to help alleviate the noise pollution many households were forced to endure. The positive results of the ongoing program have allowed individuals to live peacefully in their homes and their community.

The absence of a soundproofing program within the draft EIR suggests that while the MBTA is ready to expand its operations, it is unwilling to take into consideration the negative impacts placed upon host communities. I feel that it is imperative for the "T" to incorporate a soundproofing program that is acceptable to the community and implemented prior or as part of any modernization project of the Blue Line.

If the Blue Line Modernization Project is to be successful it must take into account the needs of the community which will be most heavily impacted. Therefore, I respectfully request that you consider not approving the EIR for the Blue Line Modernization Plan until such time as the MBTA is willing to take a closer look at the ever-present problem within their system.

Thank you for your consideration in this matter.

Sincerely,

ROBERT E. TRAVAGLINI
State Senator

3



REPRESENTATIVE
ROBERT A. DELEO
20TH SUFFOLK DISTRICT
ROOM 136, STATE HOUSE
TEL. (617) 722-2396

*The Commonwealth of Massachusetts
House of Representatives
State House, Boston 02133*

April 21, 1993

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Committees:
Vice Chairman
Bills in Third Reading
Judiciary
Co-Chairman
M.W.R.A. Legislative Caucus
Legislative Caucus of
Older Citizens Concerns

Ms. Trudy Cox, Secretary
Executive Office of Environmental Affairs
100 Cambridge Street
Boston, MA 02202

RE: EOE # 8772, BLUE LINE STATION MODERNIZATION PROJECT

Dear Secretary Cox,

After reviewing the Draft Environmental Impact Report relative to the above entitled project, I wish to make the following comments.

First, despite repeated requests by this office and many others, the issue of noise is not addressed. The M.B.T.A. has taken noise readings and is well aware of the communities concern for this issue. Noise pollution from the M.B.T.A.'s Blue Line has increased over the years to the point of having a significant negative impact on the quality of life for abutters.

The M.B.T.A. has recently made a commitment on noise mitigation in another area of the transit system, it only seems logical that this commitment be extended to the Blue Line through the environmental review process to ensure a responsive outcome.

Secondly, the proposed closing of Bowdoin Station appears to be ill-conceived. The impacts on those travelling to the Mass General Hospital, to work and to businesses in the area has not been studied in a professional manner.

Finally, the communities involved with this Project continue to be enraged over the inability of the M.B.T.A. to work with them to resolve certain issues. A prime example being the design of the Orient Heights Station. We have long stressed

the requirement that the new station design allow for the bus circulation pattern that existed prior to the placement of restrictions on the Scarpa Bridge. The failure of the M.B.T.A. to even discuss this issue with the communities involved has been most frustrating.

I thank you for your consideration of my comments and ask that you not approve the EIR for the Blue Line Modernization Project until the issues I have raised in this letter have been addressed.

Very truly yours,

Robert A. DeLeo
STATE REPRESENTATIVE

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William F. Weld
Governor
Daniel S. Greenbaum
Commissioner

Commonwealth of Massachusetts
Executive Office of Environmental Affairs
**Department of
Environmental Protection**

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APR 9 1993

MEPA

MEMORANDUM

TO: Secretary Cox, Executive Office of Environmental Affairs
ATTN: Nancy Baker, MEPA
FROM: Christine Kirby *CK* DEP
DATE: April 8, 1993
SUBJECT: EOE No. 8772 - Review of the DEIR for the Blue Line
Modernization in East Boston and Revere

The Department of Environmental Protection (DEP) Division of Air Quality Control (DAQC) has reviewed the Draft Environmental Impact Report (DEIR) for the Blue Line Station Modernization project effecting East Boston and Revere and offers the following comments. In the project change submitted in October, 1991 the MBTA proposed to close Bowdoin Station, build two new Government Center entrances, implement the temporary (12 month) use of shuttle buses between the Wonderland and Orient Heights Stations and revised plans for improving Revere Beach and State Street Stations. As a contingency measure to facilitate this process, the MBTA proposed to raise parking fees at Orient Heights Station and reduce parking fees at Wonderland to discourage commuters from driving further up the Blue Line to begin their train commute into Boston while the Beachmont Station mitigation is in progress. The DEP advocates that the MBTA adhere to its original proposal to raise parking fees at Orient Heights Station while the Beachmont Station mitigation is in progress. Supplementing this measure with a publicity campaign informing Blue Line users of available options in advance of the project's commencement should ensure a smooth transition.

Should you have any questions regarding this memorandum please contact Keith Grillo of the Division of Air Quality Control at 292-5630 ext. 5773.

One Winter Street • Boston, Massachusetts 02108 • FAX (617) 556-1040 • Telephone (617) 292-8500

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May 6, 1993

Secretary Trudy Cox
Executive Office of Environmental Affairs
100 Cambridge Street, 20th Floor
Boston, MA 02202

ATTN: MEPA Unit

RE: Blue Line Station Modernization Project, Boston, MA; EDEA No. 8772

Dear Secretary Cox:

Staff of the Massachusetts Historical Commission have reviewed the Draft Environmental Impact Report (DEIR) for the proposed project referenced above. After review of this information, MHC staff have the following comments.

The DEIR (Chapter VI) does not adequately address whether significant archaeological resources exist in the proposed project impact areas. To date, the results of the archaeological reconnaissance survey (950 CMR 70) have not been submitted to the MHC for review and comment. Therefore, the MHC is at present unable to determine what effects, if any, the project will have on significant archaeological resources which may be affected by the project. The Final EIR should include the results of "Section 106" (36 CFR 800) consultation with MHC regarding archaeological resources which may be affected by the project.

The DEIR adequately identifies the significant historic resources within the vicinity of the proposed new headhouses at the Bowdoin, Government Center, and State Street stations. MHC staff have previously consulted with the MBTA regarding the proposed construction of new headhouses and stairs adjacent to 60 State Street and Exchange Place (53 State Street) to provide secondary egress and handicapped access to the expanded State Street station. Exchange Place, the former Stock Exchange Building, is listed in the State and National Registers of Historic Places and is a Boston Landmark. In addition, the project location is across Congress Street from the Old State House, a National Historic Landmark, and the Second Brazer Building, both of which are listed in the State and National Registers.

MHC staff continue to have concerns that the size, design, materials, and placement of the proposed new State Street headhouses are visually intrusive and out of character with the adjacent historic resources. MHC staff request that the Final EIR present alternatives that would not require an enclosure over the stairs, such as the open stairs at Park Street Station, Arlington

Massachusetts Historical Commission, Judith B. McDonough, Executive Director, State Historic Preservation Officer
80 Boylston Street, Boston, Massachusetts 02116 (617) 727-8470

Office of the Secretary of State, Michael J. Connolly, Secretary

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Station, and Central Square, to avoid the introduction of new design elements at this intersection. The FEIR should also include alternatives for wheelchair access and additional information on the impact of the proposed emergency egress stair on the historic building.

These comments are provided to assist in compliance with Section 106 of the National Historic Preservation Act of 1966, as amended (36 CFR 800), Massachusetts General Laws, Chapter 9, Sec. 26-27c, as amended by Chapter 254 of the Acts of 1988 (950 CMR 71.00), and NEPA.

If you have additional questions, please contact Allen Johnson or Connie Crosby of this office.

Sincerely,

Judith B. McDonough
Judith B. McDonough
Executive Director
State Historic Preservation Officer
Massachusetts Historical Commission

cc: Boston Landmarks Commission
Boston Preservation Alliance
Jane Chmielinski, MBTA
Esther Johnson, MBTA
Karen Arpino, MBTA
Boston Redevelopment Authority
Steven Pendery, Boston City Archaeologist
Polly Harrell, Boston Affiliates, Inc.
Alan Strauss

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Metropolitan Area Planning Council

60 Temple Place, Boston, Massachusetts 02111 617/451-2770

Serving 101 cities and towns in metropolitan Boston

April 5, 1993

The Honorable Trudy Coxé, Secretary
Executive Office of Environmental Affairs
MEPA Unit
100 Cambridge Street
Boston, MA 02202

Project Identification:

Project Name: Blue Line Station Modernization
Project Proponent: MBTA
Location: Boston and Revere
BOEA: 8772
MAPC: DEIR-93-18
Received: 3/4/93

Dear Secretary Coxé:

The Metropolitan Area Planning Council regularly reviews proposals deemed to have regional impacts. These proposals are reviewed for compliance with MetroPlan 2000, the regional plan for the Boston metropolitan area, as well as for their impact upon the environment. The Council encourages MEPA to ensure that the Blue Line Modernization project complies with MetroPlan 2000.

The Metropolitan Area Planning Council would like to note its support for the modernization of the Blue Line Stations and the lengthening of platforms to serve six car trains. We believe that this project will be of great importance to long-term transit needs in the region. However, we would like to note a number of concerns with the preferred method of implementing the project, the timing of station closures and the closure of Bowdoin Station.

Marjorie A. Davis, President Edmund P. Tarallo, Vice-President Richard A. Easler, Secretary Marylou Batt, Treasurer

David C. Soule, Executive Director

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A. Wonderland Station to Orient Heights Station Work Effort

MAPC is concerned with the MBTA's level of coordination with the Central Artery Project. As we noted in our response to the ENF, the Central Artery FSEIR states "Numerous detours will be required [in the East Boston/Logan Airport area], since many of the new facilities will be built in areas occupied by existing roadways." As we noted in our ENF comment, the closure of the Blue Line would fall in the middle of this work. During 1994 the Third Harbor Tunnel, the East Boston Toll Plaza and the I-90/Logan Interchange will all be under construction. However, even more critical to traffic impact from the north is the Route 1A/Logan Interchange. The most recent Central Artery/Third Harbor Tunnel Master Schedule (February 1, 1993) shows the Route 1A interchange as initiating construction in the spring of 1995.

The timing of the initiation and completion of the Blue Line work in Revere and East Boston is critical. The proposed schedule for station closure from the spring 1994 to the spring 1995 allows for the Blue Line to return to full operation before the Central Artery Project work on the Route 1A interchange is scheduled to begin. While we are hesitant to see the Blue Line closed for a one year period, especially given the predicted 16% loss of transit patronage, we encourage the MEPA unit to waive further environmental review of this proposal, with certain conditions to be met, in order to ensure a rapid return to service on the Blue Line.

Therefore, MAPC recommends that MEPA approve the Draft EIR for the Blue Line Modernization, with the following conditions if the construction schedule were to be delayed to overlap with the Route 1A interchange work schedule:

1. Provide express commuter rail services on the Rockport and Ipswich lines between Beverly Depot and downtown Boston. It appears, from the MBTA response to our ENF comment, that the stations from Beverly Depot on north provide 66% of the ridership on the North Shore lines with 44% of all line ridership split in some unspecified fashion between Beverly and Salem.

2. Provide new train services accommodating the stations from Salem into Boston. Again the DEIR suggests that 34% of the ridership on the rail lines is from these stations. However, these stations serve much more densely developed communities, with significantly larger Boston bound populations. We would suspect that a large market of transit ridership is likely being lost due to crowded trains.

3. The MBTA be required to provide greatly reduced prices on North Shore commuter rail services. The cost of this type of reduction in fares should be included in the MBTA's capital costs as mitigation measures needed to offset the impacts of the project, and not be included in the MBTA's operating budget. We would like to be on record as opposed to the condition that the MBTA put forward, in the Executive Summary on page 9, that states that rider incentives will only be considered in the context of available funding. A 16% loss of ridership for the one year shutdown, many riders who may not return to MBTA services once the work is complete, will have serious air quality impacts and will greatly aggravate traffic conditions in the Route 1A interchange area if the Blue Line shutdown is allowed to overlap with this separate and previously MEPA permitted project.

B. Bowdoin Station Work Effort

MAPC is concerned with the closure of Bowdoin Station. However, we are appreciative of the nature of the problem. We recommend that the MBTA maintain service to Bowdoin Station until the use of six car trains is actually implemented. We further hope that a timely completion of the Program for Mass Transportation will provide the needed data to prioritize the connection of the Blue Line and the Red Line in comparison with other pressing transit improvements.

In conclusion, due to the sensitive time nature of this project and its relationship to the Central Artery/Third Harbor Tunnel work, MAPC recommends that BOEA establish a set of performance standards to enhance North Shore transit operations similar to those we suggest in this letter, and waive the requirement for additional environmental review of the Blue Line Modernization effort.

Sincerely,

David C. Soule

David C. Soule,
Executive Director

cc: Frank Stringi, Revere
Andy McClurg, Boston Transportation Department
Marc Webb, BRA
Anthony Palmere, MBTA
Daniel J. Fortier, Chief Transportation Planner
Kent Stasiowski, Project Review Coordinator

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Metropolitan Area Planning Council

60 Temple Place, Boston, Massachusetts 02111 617/451-2770

Serving 101 cities and towns in metropolitan Boston

DATE: March 4, 1993

I.D. #: DEIR-93-18

TO: Frank Stringi

COMMUNITY: Revere

Enclosed is a description of the project referenced below.

RECEIVED The Council requests that you consider whether this report adequately describes the project's impact upon your community and addresses significant environmental benefits and potential damages.

MEPA PROJECT TITLE: Blue Line Station Modernization

THE COUNCIL HAS ONLY 20 CALENDAR DAYS TO FILE COMMENT WITH E.O.E.A. TO MEET THIS DEADLINE, YOUR COMMENTS MUST BE RECEIVED AT THE MAPC BY April 5, 1993

- ☒ ADEQUATELY DESCRIBES ENVIRONMENTAL IMPACTS ?
☐ MERITS FURTHER ENVIRONMENTAL STUDY
☐ NEED MORE INFORMATION

EXPLANATORY COMMENTS:

This project will benefit ridership in Revere when completed and replace substandard Blue Line Stations in Revere with attractive and modern facilities which are handicap accessible and user friendly. Revere continues to request close coordination with the MBTA during construction and shuttle operations. It is also requested that the proposed Beachmont Station tower be reduced in scale and height so as not to visually overwhelm the adjacent neighborhood residential and commercial area.

SIGNATURE: *Frank Stringi* 3/11/93

DATE: 3/11/93

Marjorie A. Davis, President Edmund P. Tarallo, Vice-President Richard A. Easler, Secretary Marylou Bolt, Treasurer

David C. Soule, Executive Director

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The City of REVERE, MASSACHUSETTS
DEPARTMENT OF PLANNING AND COMMUNITY DEVELOPMENT
FRANK STRINGI • DIRECTOR
281 BROADWAY, REVERE, MA 02151

ROBERT J. HAAS, JR.
Mayor

(617) 286-8181 FAX (617) 286-8135

March 15, 1993

Secretary Susan Tierney
Executive Office of Environmental Affairs
100 Cambridge Street
Boston, MA 02202

Attention MEPA Unit

RE: EOE #8772 - DEIR, Blue Line Station Modernization Project

Dear Secretary Tierney:

With respect to the above referenced Draft Environmental Impact Report, the City of Revere Department of Planning and Community Development offers the following comments:

The City of Revere recognizes that this project will benefit ridership in Revere when completed and replace the existing substandard Blue Line Stations with attractive and modern facilities which are handicap accessible and user friendly. However, due to the City's concern of a significant ridership drop during construction which would result in increased automotive traffic within Revere during the midst of the East Boston/Logan Airport segment of the Central Artery project, it is recommended that the MBTA institute greater measures which will keep ridership levels up during construction. It is recommended that the MBTA operate direct bus shuttles from the Lynn Parking Garage and from the Wonderland Station to eliminate potential rider delays as well as increase express bus services from other North Shore communities.

Thank you for the opportunity to comment on this important transportation improvement project.

Sincerely,
Frank Stringi
Frank Stringi
DPCD Director

C: Mayor Robert J. Haas, Jr.

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RAYMOND L. FLYNN
MAYOR

MARY NEE
DIRECTOR

PUBLIC FACILITIES DEPARTMENT

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April 5, 1993

Secretary Trudy Cox
Executive Office of Environmental Affairs
100 Cambridge Street, 20th Floor
Boston, MA 02202

Attention: Nancy Baker, NEPA Unit

Re: EOPA #8772, Blue Line Modernization, Boston/Revere

Dear Secretary Cox:

The City of Boston Public Facilities Department has reviewed the Draft Environmental Impact Report (DEIR) for the proposed project referenced above and hereby submits the following comments in response:

1. The construction of the Blue Line headhouse on City Hall Plaza must be approved by the Public Facilities Commission. Commission approval is founded on recommendations by Design Review staff of the Public Facilities Department. Thus once the design phase for this station recommences, close coordination at all phases of design will be necessary between MBTA and PPD. The FEIR should contain a proposed schedule for the design phases.
2. The location presently shown of the Blue Line headhouse on City Hall Plaza compromises already existing pedestrian "desire lines" and in addition, its present location blocks views both from and across the Plaza, thus compromising the urban design of the Plaza. PPD requests that two alternative designs be explored for this headhouse: 1) that it be moved closer to the JFK building, beyond the corner of the fountain and 2) that the larger headhouse be placed on the far side of the street at Centre Plaza while the one at the City Hall Plaza side be minimized. In addition, PPD requests that a pedestrian study be done of both Blue Line and Green Line passengers showing paths to and from Government Center Station as well as destinations and origination points.

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Secretary Trudy Cox
April 5, 1993
Page Two

3. The proposed design of the Blue Line Headhouse on City Hall Plaza has several shortcomings. 1. It will require intensive maintenance. 2. The designed entry points will increase congestion along an already crowded sidewalk. 3. The architecture neither fits with the immediately adjacent modernist buildings nor the nearby historic buildings. The MBTA indicated that because of its own re-examination of design standards for maintainability that this headhouse would be substantially redesigned. When this occurs, PPD suggests that items two and three be addressed as well as item one above.
4. The Government Center T Station is not well maintained. We are concerned that an additional MBTA station will suffer from the same maintenance problems. We suggest that in the FEIR, the MBTA provide a list of specific items to be maintained and a proposed schedule of regular maintenance for all major building elements in the new headhouse. In addition, the FEIR should contain commitments from the MBTA to perform daily maintenance, i.e., cleaning and snow removal.
5. Security has become an increasingly serious issue at the Government Center T stop. The FEIR should explain what special design features the T will recommend for the Blue Line Station, and what operational measures will be followed to increase security at this location.
6. The Public Facilities Department will be constructing two projects on City Hall Plaza during the life of this MBTA project: the City Hall Plaza Repair Project and the Bridge over New Congress Street. Close coordination will be required between the MBTA and PPD so that we avoid disruption of each others projects as well as the public access to the Plaza.

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Thank you for the opportunity to comment on the DEIR. The Public Facilities Department looks forward to working with the MBTA on future stages of this project.

Sincerely,

Mary Nee
Director



PPD - Boston's Neighborhood Development Agency
26 COURT STREET • BOSTON • MASSACHUSETTS • 02108 • 617-435-3880

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City of Boston
The Environment
Department

Raymond L. Flynn
Mayor

Lorraine M. Downey
Director

Boston City Hall/Room 805
Boston, Massachusetts 02201
617-655-4116 or 655-3850

April 7, 1993

Secretary Trudy Cox
Executive Office of Environmental Affairs
100 Cambridge St. 20th Floor
Boston, MA 02202

Attn: Nancy Baker, MEPA Unit
RE: EOEA #8772, Blue Line Modernization, Boston/Revere

Dear Secretary Cox:

The City of Boston Environment Department has reviewed the Draft Environmental Impact Report (DEIR) for the proposed project referenced above and hereby submits the following comments in response:

The Environment Department is fully supportive of modernizing Blue Line facilities. Modernization is necessary to avoid and relieve overcrowding, improve accessibility to the physically challenged, facilitate eventual expansion of the Blue Line, increase operational flexibility, and conform to transit commitments pursuant to the State Implementation Plan. In general, the DEIR adequately describes the need for the project and the necessity for temporary closure of the Blue Line beyond Orient Heights. The DEIR does leave some issues unresolved, however. The following merit further explanation/refinement in the FEIR:

The Environment Department is disappointed with the unimaginative and perfunctory discussion of pedestrian issues presented in the DEIR. The analysis of pedestrian impacts at Bowdoin, State, and Government Center stations represents a serious shortcoming in an otherwise generally adequate document.

For example, the DEIR claims (p. III-43) that the proposed State St. headhouses will not adversely impact pedestrian circulation because the sidewalks are not at their narrowest in the area proposed for the headhouse. However, the proposed headhouses will in fact create one more narrow spot in a sidewalk which currently experiences several bottlenecks. The exact locations of the headhouses (especially the headhouse proposed adjacent to 53 State St.) will create major obstacles to pedestrian flow at the entrances to an important pedestrian crossing. The proposal presented in the DEIR will have unacceptable impacts on pedestrian circulation and needs to be thoroughly redesigned. The FEIR should detail pedestrian movements in the immediate area of the headhouses, update the unidentified 1989 pedestrian study, and should propose appropriate mitigation for restrictions in flow caused by the proposed headhouse locations, including obtaining an easement for pedestrian use of the private sidewalk at 60 State St.

Air Pollution Control, Boston Art, Back Bay Architectural, Boston MB Architectural, Boston Landmarks and the Conservation Commission

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EDB on EOEA #8772

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The Environment Department requests that alternatives to the current access proposal for the State St. Station be presented in the FEIR. Alternatives should include discussion of placing wheelchair-accessible structures at the underutilized entrance under 28 State Street. No mention of this entrance is made in the DEIR. The MBTA should also present information on whether a variance to the Americans with Disabilities Act would be appropriate at State Street (although this is not preferred), or whether a partial solution to the accessibility issue is possible.

In addition, this Department has concerns with the design of the headhouse and stairs adjacent to 53 State Street. The 53 State Street building is a Boston Landmark, and as currently planned the headhouse adjacent to this structure is too massive and visually intrusive. The Environment Department requests that the MBTA present alternative designs in the FEIR of an open stairway with a separate "stand alone" structure for wheelchair access, as opposed to the current design which has both access points enclosed by one roof. The BLC staff are also concerned with the design of the optional emergency egress stairs. The MBTA should also provide information in the FEIR on the impact of the stairs on the sidewalks around it and on the adjacent landmark.

The DEIR does make an adequate argument that Bowdoin St. station should be closed at the end of the modernization project. However, the closure of this station will significantly impact users of Massachusetts General Hospital, who currently comprise 23% of the users of Bowdoin Station. Many of these users are elderly or in frail health, so the additional walk of about 600 feet from the new Government Center headhouse to MGH will represent a significant impact to these individuals. In all, about 78% of the current Bowdoin Station users will be negatively impacted by the station's closure (III-60). The DEIR does not seem to recognize the severity of this situation. The best form of mitigation for this negative impact would be the acceleration of the connection between the Red Line Charles/MGH station and the extended Blue Line. The DEIR implies that this connection will be made by 2010 A.D., but does not commit to a specific date or offer any other details on the Red-Blue Line connector. The FEIR should offer more details on the proposed connection in the context of mitigation for the closure of Bowdoin Station.

Construction of the headhouses at State and Government Center will need to be closely coordinated with the City of Boston Public Facilities Department (FPD). Currently, FPD is planning for a pedestrian bridge linking City Hall to 60 State St., and has renovations scheduled for City Hall Plaza as well. In addition, the FEIR should contain specific maintenance commitments by MBTA for the headhouses on City Hall Plaza.

The current Government Station headhouse is not well maintained, which causes problems on the Plaza with blowing trash and snow, and puddles of water (and wintertime sheets of ice) collect around the station during rain/snow events, inhibiting pedestrian movement and creating safety hazards. The MBTA should also discuss renovating the existing Government Center headhouse in the FEIR. The current design does not allow the easy identification of the structure as a transit headhouse from Center Plaza or Cambridge/Tremont St. vantages. In addition, the preliminary design for the new Government Center headhouse on City Hall Plaza will require intensive maintenance, and will not be staffed, which could create security problems.

The new headhouse will also create an additional pedestrian obstacle in a heavily-used section of City Hall Plaza. The FEIR should investigate relocating the headhouse as close to the JFK federal building as possible. The relocation would help reduce negative pedestrian impacts on City Hall Plaza and would further mitigate the impacts associated with the closure of Bowdoin Station.

The narrative discussion of traffic impacts in East Boston and Revere (III-25) refers to Table 18 as confirmation that the shuttle bus service will not degrade levels of service (LOS) in the shuttle bus corridor. However, while the overall LOS will not fall at any intersection, at least 5 individual turning movements within intersections will experience decline in LOS. The FEIR should investigate the feasibility of preventing partial degradation of LOS at area intersections.

The DEIR makes the case that shuttle bus service is the most feasible option on the outer Blue Line during the viaduct replacement. However, it should be noted that bus service is more sensitive to weather-related disruptions than light rail service. The FEIR should outline any emergency plans which might exist regarding maintenance of transit service in the Blue Line corridor in the event of severe weather.

Construction impacts and changes in commuter parking patterns as a result of the modernization project have the potential to impact residents in the vicinity of Orient Heights Station and Maverick Square. The MBTA should closely coordinate all construction activities with the Boston Transportation Department, and should commit to keeping East Boston and Revere residents informed of construction schedules and phasing.

The issue of parking availability at Blue Line Stations deserves fuller discussion in the FEIR. The Lynn commuter rail garage is an obvious resource for meeting future parking demands. The FEIR should outline a program for increasing use of this facility by Blue Line riders.

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The section on noise describes maximum noise levels from existing trains of up to 95 dBA. This is in excess of EPA guidelines for train corridor noise, and is well above respective DEP and City standards for ambient and residential noise exposure limits. Modernization of the Blue Line should include reduction of noise from existing operations. The FEIR should report on the relative costs of various noise abatement strategies along the Blue Line corridor.

The City noise standards referenced on page IV-11 do not exist. The Air Pollution Control Commission regulates Lmax levels, construction noise, and noise from various pieces of mechanical equipment, but does not have standards referencing L(DN) values. The FEIR should correct this error, and compare existing and future Blue Line noise levels with City and DEP standards.

The commitment to recycle construction and demolition debris (V-5) is encouraging.

In summary, the Environment Department supports upgrading Blue Line facilities to meet transit requirements and to enhance the convenience, safety, and accessibility of public transportation. The DEIR is generally adequate, with the major exception of discussion of pedestrian issues at State St., Government Center, and Bowdoin stations. In addition, mitigation for operational noise impacts along the above-ground portion of the line in East Boston and Revere deserves fuller discussion in the FEIR.

I thank you for your time and attention.

Sincerely,

Lorraine M. Downey
Lorraine M. Downey
Director

LMD/AP:ap

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Boston Water and
Sewer Commission

425 Summer Street
Boston, MA 02210-1700
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Fax 617-330-5187

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April 7, 1993

Ms. Trudy Cox, Secretary
Executive Office of Environmental Affairs
100 Cambridge Street, 10th Floor
Boston, MA 02202

Attn: MEPA Unit

Re: Massachusetts Bay Transportation Authority (MBTA)
Blue Line Station Modernization Project
EOEA #8772

Dear Mr. Cox:

The Commission has reviewed the Draft Environmental Impact Report (DEIR) for the MBTA's Blue Line Station Modernization Project at Bowdoin, Government Center, State, Maverick, Orient Heights and Suffolk Downs. The modernization project proposes to improve access with new entrance/exits at two stations, to lengthen platforms to accommodate six-car trains at three stations and to close the Bowdoin Station.

Three other Blue Line Stations: Airport, Aquarium and Wonderland are also within the City of Boston but are being addressed in separate reports because of the coordination necessary with Central Artery/Third Harbor Tunnel Projects.

The Commission requests that the following comments be addressed in the Final Environmental Impact Report:

- The DEIR did not discuss in enough detail the impact on water, sewer and drain lines of the modernization at Government Center, State and Maverick stations. The proponent should include a discussion of the impacts in the Final Environmental Impact Report (FEIR). (36)
- Project impacts were not addressed at either Suffolk Downs or Orient Heights stations. The FEIR should discuss the impacts, if any, on the water, sewer and drain lines at these stations. Any impacts from the closure of the Bowdoin Station should also be included in the FEIR. (37)



Ms. Judith Cox, Secretary
April 7, 1993

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During the design period, the proponent should discuss with the Commission's Engineering Department the project's progress, to facilitate the review process.

Thank you for the opportunity to comment on this project.

Yours truly,


John P. Sullivan, Jr., P.E.
Chief Engineer

JPS/PK/mo

cc: Jane Chmielinski, MBTA
Patrick J. Foley, BWSC
Stephan Shea, BWSC
Susan Norton, MWRA

**Boston
Redevelopment
Authority**

Raymond L. Flynn, Mayor
Clarence J. Jones, Chairman
Paul L. Barrett, Director

Secretary Trudy Cox
Executive Office of Environmental Affairs
100 Cambridge Street
Boston, MA 02202

Attention: MEPA Unit

Dear Secretary Cox:

Re: EOE #8772 - Blue Line Station Modernization Project/Draft Environmental Impact Report

Pursuant to regulations implementing M.G.L., Chapter 30, Sections 62-62H, the Boston Redevelopment Authority has reviewed the above-referenced Draft Environmental Impact Report and submits the following comments.

The proposed Blue Line Station Modernization Project involves the construction of modernization improvements at several Blue Line rapid transit stations in downtown Boston, East Boston, and Revere, as part of the MBTA's ongoing program to improve its rapid transit service and facilities. Stations within the City of Boston which are included in this project are Bowdoin, Government Center, State, Maverick, Orient Heights, and Suffolk Downs. The proposed work includes the provision of barrier-free access at all stations, platform lengthening to accommodate six-car trains, structural improvements and new or updated support systems where required, and related infrastructure improvements. The project also includes the closing of Bowdoin Station and construction of two new station entrances/exits to the Blue Line at Government Center and the construction of two new entrances/exits at State Street. In addition, reconstruction of the Winthrop Avenue viaduct at the Beachmont Station in Revere will require the suspension of rapid transit service between Wonderland and Orient Heights stations for approximately 12 months, to be replaced by shuttle bus service to the Orient Heights station.

The BRA supports this project to update and modernize the Blue Line facilities. We believe that on the whole the long-term effects of the proposed improvements will be very positive, since they will improve the accessibility of the Blue Line to riders of all physical abilities, increase the capacity of this transit line and thus encourage greater use of public transportation, and enhance the physical appearance and environment of the stations. In addition, these improvements will help to further the MBTA's commitment to provide reliable and adequate public transit services to mitigate the traffic-related impacts of the Central Artery reconstruction.

One City Hall Square
Boston, MA 02201-1007
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In general, we find that the Draft EIR has adequately described the anticipated impacts from this project, including the need for temporary closure of the Blue Line beyond Orient Heights, as well as the measures that are proposed to be taken to mitigate and minimize the impacts. However, there are a number of outstanding issues, relating to station location and design in the downtown areas, construction-period impacts, and operational noise impacts, that remain to be resolved in the Final EIR. These issues are detailed below.

Downtown Stations (Government Center and State)

Within the downtown area of Boston, the Blue Line Station Modernization Project proposes two new entrances to the Government Center Station (to replace Bowdoin Station) and several new entrances to State Station, in the vicinity of State and New Congress Streets. The locations presented in the Draft EIR apparently are the preferred locations of the MBTA. However, we have several concerns with the selected sites and the lack of an adequate analysis of the impact of their specific placement in a busy pedestrian and important architectural environment.

Pedestrian Circulation Concerns/Headhouse Locations

Both the Government Center and State Street areas experience heavy pedestrian flows throughout the day due to constant use of area facilities (government offices, tourist attractions, Quincy Market). These areas also draw large crowds for special events at City Hall Plaza and the Faneuil Hall Markets area. Therefore, any interference with pedestrian flows should be held to an absolute minimum. However, the proposed headhouse locations may, in fact, create serious congestion along these heavily-travelled sidewalks (Cambridge Street, State Street, New Congress Street), and significantly impede pedestrian movement. In particular, the proposed headhouses adjacent to both 53 and 60 State Street could, under their present design, severely restrict the free flow of pedestrian traffic at these locations near a major intersection. Similarly, the proposed Government Center entrances/exits adjacent to the City Hall Plaza fountain could be an obstacle to acceptable pedestrian movement along Cambridge Street. Unfortunately, the Draft EIR lacks any pedestrian impact analysis at these two stations and any evaluation of the effect of the proposed headhouse locations on pedestrian flows. This deficiency must be corrected in the Final EIR. The Final EIR should include a detailed study of pedestrian movements in the vicinity of the Government Center and State stations, including pedestrian desire lines, the impact of the proposed headhouse locations on pedestrian circulation, and appropriate mitigation for any restrictions to pedestrian flow that could result.

Because of the problems cited above, we believe that further study is needed with regard to the location of the headhouses. There is indeed a need for more creative solutions. The BRA advocates locations (together with massing and design of the headhouses) which not only will minimize interference with pedestrian flow but also, to the extent possible, will enhance and enrich pedestrian movements and experiences. Therefore, alternative sites for the headhouses should be studied in the Final EIR.

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For the Government Center Station, we recommend that a more linear design for the headhouse adjacent to the fountain be examined as a means to minimize pedestrian interferences. In addition, the MBTA should consider the possibility of moving the headhouse closer to the JFK Building area as a further means to enhance pedestrian circulation at this location.

41

For the State Station, several alternatives are recommended for further study. At 53 State Street, consideration should be given to reopening the existing access to the outbound platform from the basement of the Exchange Building (with elevator access from the lobby of the building) as an alternative to new construction in the sidewalk area (which we suggested in our comment letter on the ENF) or to a location farther south along Congress Street on the other side of the entry plaza to Exchange Place. For the entrance proposed at 60 State Street, alternative locations that should be examined include the accessway opposite Kilby Street, the State Street frontage of the 28 State Street building, and the existing station entryway under the Washington Mail arcade of 28 State Street (no mention of this entrance was made in the Draft EIR). All of these locations would serve, in varying degrees, to mitigate potential adverse impacts on pedestrian flows.

42

Design Issues

Three of the four proposed headhouse locations are within the Government Center Urban Renewal Area (the two at Government Center and the one at 60 State Street); the fourth is on property which is part of the 53 State Street (Exchange Place) PDA. The BRA is therefore the primary design review agency. Additionally, the Massachusetts Historical Commission has requested BRA design review on the State Station headhouses. The Parks Department would join the review for the Bowdoin Square work; the Public Facilities Department/Real Property Department for the City Hall Plaza headhouse. Of special concern to the City is that the design of the headhouses and station entrances be such as both to facilitate station maintenance and security by the MBTA, and to avoid any potential impedance of City property maintenance and special events needs on the Plaza area.

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Views across, into, and out of City Hall Plaza are of great concern. City Hall and its Plaza form a setting of immense civic importance with landmarkable stature. Additionally, the State Station locations are virtually surrounded by buildings of historic significance. As part of the design review, therefore, perspective sketches from selected viewpoints at both locations would be important in assessing impacts on these historical and civic resources.

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Designs which minimize visual intrusion in these highly sensitive areas are strongly urged. Methods discussed in meetings held heretofore include minimizing the perceived massing of the headhouses by utilizing design features appropriate to the specific locations and minimizing the actual massing of structures by placing roofs only where absolutely necessary and separating functions where possible.

45

Furthermore, because of the historical significance of this area of the old Boston subway system, if no old abandoned station or tunnel exists which can be utilized as

SECD/04.LTR/041393/3

part of the project, it may be of interest to highlight historical aspects of the area or of the subway itself, as is done currently in existing MBTA station artwork.

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Historic Resource Impacts

The Draft EIR does not include any analysis of the potential impact of the proposed State Station headhouses on the several historic resources in the area, including in particular the Old State House, the Exchange Building, and the Boston Massacre site. Nor is there any information presented on the proposed design of the headhouses themselves and on their compatibility with the historic and architectural fabric of the area. This information and analysis, which was required by the MEPA scope, must be presented in the Final EIR. The minimal sketches that were included in the Draft EIR would indicate that the present design for the headhouse adjacent to 53 State Street (a Boston Landmark) would be too massive and visually intrusive. Further design work is needed to eliminate this adversity. Consultation with the Boston Landmarks Commission and the Massachusetts Historical Commission also is necessary.

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Bowdoin Station Closure

Bowdoin Station is programmed to close in 1999. The Cambridge Street extension of the Blue Line to Charles Street is discussed briefly in the Draft EIR as benefitting from the Bowdoin closure, but it does not appear on a construction schedule. (The Draft EIR implies that this connection will be made by 2010). We strongly recommend that this project be activated for a construction start no later than the closing of the Bowdoin Station. Implementation of this project would serve as a primary mitigation for the projected increase in user walking distances, and other pedestrian impacts not fully addressed by the Draft EIR, as well as providing handicapped accessibility to the Charles Station and convenience for MGH patients, visitors, and personnel. The Red Line/Blue Line link at this location would greatly improve airport accessibility and help transit user traffic through the Green and Orange line segments now serving this function. Bicycle racks should be located at Government Center as an "outlying station" (Blue Line Terminus).

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Infrastructure Impacts

The drawings and sections (figs. 12, 16, 18 of Appendix 7, Historical/Archaeological) submitted with the Draft EIR indicate that the tunnel widening and station platform, lobby, and egress constructions at Government Center and State stations will have considerable impact on utilities in the entire project area. The Draft EIR acknowledges this impact and gives assurance that the MBTA will work with local agencies to provide continuous service during project construction and utility relocations.

At a minimum, the following are urged as general guidelines for further development of utility configurations:

- (1) Relocation designed in full cooperation with all affected utilities, commissions, authorities, and agencies.

SECD/04.LTR/041393/4

- (2) Continuous (uninterrupted) service to be provided during construction, including relocated systems.
- (3) Emergency procedures established for timely action on any system affected by the project.
- (4) Upgrading or replacement of all aging or near-design-capacity-level utility conduits/pipes should be performed as part of the project.

It is strongly urged that utility impacts for the Government Center Station be studied immediately rather than later so as to incorporate any "adjustments" to "elements" of the station design before parties have signed off on the new headhouse designs and locations.

The MBTA's commitment to allocate funding for infrastructure improvements such as the Congress Street pedestrian bridge is commendable. With the preferred location of the new Government Center headhouse adjacent to the City Hall Plaza fountain, attention also should be given to the feasibility of funding the fountain's reactivation and maintenance of the area around the proposed structure. Such support would serve to help mitigate the impacts of the additional construction at the Government Center Station.

Construction-Related Impacts

Temporary construction-related impacts will occur during the approximately seven-year construction period, but these impacts can be minimized with the application of appropriate mitigation measures and strict compliance with applicable City, State, and Federal regulations. These construction impacts will affect not only the Blue Line riders who will be using the stations while construction is underway, but also residents of East Boston who live adjacent to the Blue Line right-of-way and the individual stations. The Draft EIR has described a number of construction mitigation requirements which the MBTA intends to impose on its contractors in order to minimize potential impacts as fully as possible. In particular, we are pleased that the MBTA has agreed to suspend construction work if necessary during periods of heavy station usage in order to ensure the safety of passengers. We also are appreciative of the commitment to require contractors to recycle construction debris which has the market for recycling. With regard to noise monitoring, however, the lack of commitment on the part of the MBTA is disturbing. We believe that such monitoring should be performed as part of the construction work by the MBTA or its contractors and not be left to the City to undertake at its own expense (page IV-17).

Maintenance of vehicular circulation in the vicinity of the station construction sites, especially in the downtown area, will be critical and will require close coordination with the City of Boston. The Draft EIR indicates that temporary traffic impacts will occur at Government Center, State Street, and Maverick Square due to partial street closings and lane restrictions. Therefore, it will be essential that the MBTA coordinate site construction activities with the Boston Transportation Department, in order to ensure that traffic circulation is maintained at all times. Likewise, adequate and safe

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pedestrian circulation must be assured, particularly in the vicinity of State Station and Government Center Station, which, as noted previously, are areas of heavy pedestrian use. Construction Management Plans must be filed with the City of Boston prior to initiation of any of the project work. The Draft EIR fails to acknowledge this requirement. In addition, the MBTA must make a commitment to keep residents of the affected neighborhoods fully informed of construction schedules and phasing.

For the Downtown stations, the construction phasing plans require additional study. In particular, the Government Center diagrammatic plans are alarmingly unspecific with regard to pedestrian flows around 1, 2, 3 Center Plaza or the fountain area during construction, and the State Station (especially Phase 2) plans appear extremely limiting. Further, it appears as though the temporary ramp is cutting into the metal and granite fabric of the existing ramp at 53 State. We are also concerned with the fact that "... peak platoons of pedestrians along State Street will be operating at capacity", as stated in the Draft EIR (pg. III-46), and the effect that the construction activities will have on them.

Due to the need to close Beachmont Station to replace the viaduct over Winthrop Avenue in Revere, the MBTA has proposed a temporary (approximately one-year) shuttle bus service between Wonderland Station and Orient Heights Station, with stops at the intervening stations. The Draft EIR presents a strong case that this is the most feasible option and includes data to indicate that the shuttle buses will have minimal impact on levels-of-service at area intersections. However, buses are more sensitive to weather-related disruptions than are light-rail vehicles (as the recent blizzard showed). Therefore, the Final EIR should describe any emergency plans which the MBTA would institute to maintain public transportation service in the Blue Line corridor should severe weather conditions occur.

In addition, there is considerable neighborhood concern regarding the addition of over 40 bus trips an hour (during peak hours) at the Orient Heights Station and the potential for causing traffic congestion and degradation of air quality in the station area. The Bennington Street/Saratoga Street intersection currently operates at an unacceptable LOS of F during both the AM and the PM peak hours. The increase in the number of buses accessing the station could seriously exacerbate this situation. Therefore, it is imperative that the MBTA investigate feasible traffic mitigation measures that could be implemented to eliminate any adverse impacts on vehicular circulation in the Orient Heights Station area. Again, close coordination with the Boston Transportation Department will be essential.

Another potential major impact at Orient Heights Station is related to parking, particularly if a substantial number of commuters decide to drive to Orient Heights to avoid an extra change in mode with use of the shuttle service. The Draft EIR indicates that the MBTA parking area and the closest on-street spaces already are well used. A large increase in the number of cars trying to park in the vicinity of the Orient Heights station could adversely affect the adjacent residential neighborhood. The Final EIR should provide additional information on measures that the MBTA will implement to minimize this impact and prevent commuter parking on residential streets. Mention is made in the Draft EIR of the potential to use the Lynn Commuter

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as an alternative for Blue Line riders. This option should be actively pursued by the MBTA to accommodate the temporary parking requirements and reduce the pressure on the Orient Heights Station area.

Operational Noise Impacts

The excessive noise impact from operation of the Blue Line trains is of particular concern, particularly to East Boston residents who live along the transit alignment. Blue Line noise measurement data included in the Draft EIR indicates that at the six locations measured, existing L_{eq} levels ranged from 67 to 86 dB(A), all of which are above the City of Boston and ANSI standards (55-65 dB(A)) for residential noise exposure. These levels will increase slightly in the future with the use of six-car trains. Moreover, data presented in the Noise Appendix showed existing SEL levels at or exceeding 100 dB(A) at all locations (except location 3, for which data were not considered to be appropriate due to nearby construction activities).

Considering these conditions, therefore, it is strongly recommended that the MBTA investigate the inclusion of appropriate mitigation measures in its modernization project to reduce train noise to acceptable levels. It is noted that the new Beachmont replacement viaduct will include ballast mats and underplatform acoustical panels to reduce noise and vibration levels. The MBTA should consider the installation of ballast mats at additional locations along the rail corridor, especially when the alignment is adjacent to residences. Another option would be the soundproofing of windows along the alignment, as the MBTA has committed to do along the Old Colony right-of-way in Dorchester. The Final EIR, then, should present detailed information on the potential for implementing noise abatement strategies along the Blue Line Corridor.

In conclusion, the BBA reiterates its support of the upgrading of the Blue Line stations to provide modern and pleasant transit facilities for the Blue Line patrons and to enhance the accessibility and convenience of this line. As we have noted, however, there are a number of design, construction, and noise issues which remain to be resolved as this project further develops. We are confident that, with further planning, these issues can be satisfactorily resolved. We look forward, then, to reviewing the Final EIR.

Sincerely,


Paul Reavis
Assistant Director for Engineering
and Design Services

cc: Jane Chmielinski
M.B.T.A.

SECD/04.LTR/041393/7

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BOSTON
TRANSPORTATION
DEPARTMENT

ONE CITY HALL PLAZA/ROOM 721
BOSTON, MASSACHUSETTS 02201
(617) 725-4680 FAX (617) 725-4475

20 April 1993

Secretary Trudy Coxé
Executive Office of Environmental Affairs
100 Cambridge Street
Boston, MA 02202

Dear Secretary Coxé:

I am pleased to submit the following comments on the draft environmental impact report for the MBTA's Blue Line Station Modernization Project (EOEA #8772).

The Blue Line modernization program will provide important transportation benefits by expanding transit capacity during Central Artery/Tunnel construction and ensuring full accessibility. We support this important project, and generally believe that the DEIR addresses the key issues. However, the final EIR should provide more detail about project impacts and appropriate mitigation measures in the following areas.

Downtown stations

The MBTA proposes to close Bowdoin station permanently and establish new entrances for Government Center station. Although the MBTA makes a strong argument for closing Bowdoin from an engineering and safety standpoint, we are concerned about the impact on passengers. As the MBTA's ridership survey showed, 78 percent of the riders surveyed will have a longer walk. Massachusetts General Hospital is the most common destination among Bowdoin passengers (23 percent); it is also the farthest. Whereas closing Bowdoin will add, on average, 197 feet to the average walk distance, passengers walking to Massachusetts General will walk an additional 570 feet. This increase could be significant to elderly or disabled passengers who are seeking medical treatment at the hospital. The information presented does

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RICHARD A. D'AMICO, COMMISSIONER

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Secretary Coxé
Page 2

not indicate whether these passengers are commuting to work or making medical trips; the executive summary, however, refers to "elderly riders who walk to and from MGH" (page s-7). The MBTA should make further efforts to determine what passengers will be affected and to develop appropriate mitigation measures.

One potential mitigation measure is the acceleration of the MBTA's efforts to extend the Blue Line to Charles Street. The DEIR suggests that such a connection will address the inconvenience that closing Bowdoin will cause. Although this project has been in discussion for quite some time, the DEIR provides only sketchy details about the project schedule. The Final EIR should address the feasibility of moving this project forward in connection with the Blue Line Modernization program, including a schedule.

Plans for constructing new headhouses at State and Government should be closely coordinated with the City of Boston. The City's Public Facilities Commission will need to approve the construction of a headhouse on City Hall Plaza. In addition, the Public Facilities Department has plans to construct a pedestrian bridge linking City Hall to 60 State Street and has scheduled renovations for City Hall Plaza. Close coordination will be necessary both to ensure design consistency and to allow access to the plaza during construction.

The FEIR should outline plans for ensuring appropriate levels of maintenance and security at a new Government Center headhouse. The City has experienced consistent problems in this regard with the existing headhouse; these problems should not be duplicated at a second location on the plaza.

The DEIR does not pay sufficient attention to pedestrian movements in the highly congested State Street - Government Center corridor. Proposed new headhouses for Government Center and State Street Stations will be placed in extremely congested locations, further constraining sidewalk space. The MBTA should address this issue in more detail.

The proposed location of the new Government Center headhouse is very close to a heavily used section of City Hall Plaza. The FEIR should explore the possibility of moving the entrance closer to the JFK Federal Building. This would help alleviate congestion on the plaza and partially mitigate the impacts of closing Bowdoin Station.

Shuttle bus impacts

The MBTA proposes to run shuttle buses to Orient Heights for a one-year period during construction. The City is extremely concerned about the impacts of this measure. First, the East

BOSTON TRANSPORTATION DEPARTMENT
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Secretary Cox
Page 3

Boston community will be adversely affected by increases in traffic volumes along Bennington and Saratoga Streets. The large number of shuttle buses will cause traffic congestion, noise, and air quality impacts.

Second, we are concerned about the impacts of commuters who choose to drive to Blue Line stations in East Boston instead of using the shuttle buses. The MBTA survey indicates that about 15 percent of Blue Line passengers will drive to their destinations -- or more than 1000 riders during the two-hour morning peak period. If these commuters drive to Orient Heights or other Blue Line stations, surrounding neighborhoods will be severely affected.

The MBTA shows a large number of unregulated on-street parking spaces within one-quarter mile of Orient Heights stations. This should not be interpreted to suggest that this neighborhood will not be affected by the proposed busing plan. These spaces are currently unregulated because the supply is in balance with the demand at this time; they are not intended to be available to all-day parkers.

At the request of residents, the City has implemented its resident parking program in areas where outside interests (like commuters) are competing with residents for a limited parking supply. Should parking demand change in the vicinity of East Boston Blue Line stations in response to the shuttle bus program, local residents could call upon the City to expand the resident parking program.

A number of East Boston residents who live near Orient Heights station have expressed an interest in closing the Barnes Avenue pedestrian passageway. The availability of this shortcut facilitates the use of local streets as a kiss-and-ride staging area. The MBTA should look into designating an appropriate number of short-term parking spaces in its parking lot at the station to help address this problem.

The MBTA mentions two mitigation measures: encouraging commuters to park in the Lynn garage and changing on-street parking regulations. The FEIR should include a detailed plan for increasing the use of the Lynn park-and-ride facility, for example through pricing incentives, service changes, etc.

In addition, the MBTA should present a plan for defraying any additional costs the City incurs for increasing enforcement of parking regulations. The MBTA should consider funding expansion of the East Boston resident parking program, as well as funding supplemental BTB enforcement personnel, to maintain the quality of life for East Boston residents.

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Secretary Cox
Page 4

The MBTA should also consider the feasibility of improving pedestrian access in the vicinity of East Boston stations likely to be affected by shuttle bus traffic, especially Orient Heights.

The MBTA should consider measures to increase traffic safety at these locations, including funding traffic signals where warranted and funding the use of Boston police officers at locations where pedestrian/vehicle conflicts exist or locations where intersection capacity can be improved by police control. BTB would determine the locations and duration of police coverage.

Bridge reconstruction on Saratoga Street will include replacement detectors but not a new controller to replace the 1978 model presently operating the signals. The MBTA should replace this controller with a state-of-the-art model as part of the project mitigation before introducing shuttle buses to the area.

Finally, traffic counts should be taken at Bennington and Saratoga so that these signals can be retimed as needed prior to implementation of the temporary shuttle bus program.

Construction management

The DEIR points out the overlapping construction schedules for State, Aquarium, and Government Center. In particular, work at State Street Station affecting roadway widths on Congress Street and State Street needs to be coordinated with the Central Artery/Tunnel work schedule so that it does not occur when the Surface Road is closed or severely restricted in width due to utility relocation work. The MBTA should coordinate this construction through the City's Central Artery/Tunnel Project Team.

Phase 2 of the construction traffic sequencing plan shows only one lane for northbound flow on Congress Street with two lanes on State Street. This is not acceptable. An alternative scheme will be required unless this work can be done outside of peak traffic hours. Pedestrian flows also appear to be a problem during this phase.

Phase 5 will require a major rerouting of Boston Transportation Department computer communication cables. Some of these conduits do not appear to be listed in the utility inventory.

Parking availability

The analysis of parking along the Blue Line corridor needs further clarification. The DEIR reports that 85 percent of the parking spaces now available to Blue Line passengers are occupied. However, this appears to include 650 spaces located in an MDC lot near Wonderland Station that is "paved but unopened at this

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Page 5

time." Removing these spaces from the available supply yields an occupancy rate of 100 percent. The DEIR reports that this parking lot "could reopen if demands warranted its reopening." The FEIR should pursue this option.

The DEIR indicates that an even more serious parking shortage will occur along this corridor in the long term. The FEIR should present a detailed proposal for increasing parking along this corridor. The plan should look at the potential for expanding structured parking along the Blue Line and develop a strategy for attracting more commuters to the Lynn garage.

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Other impacts

As the Boston Environment Department indicated in its comment letter, current noise levels on the Blue Line exceed city, state, and federal guidelines. The MBTA has already agreed to introduce soundproofing measures on the Red Line. The Blue Line corridor deserves equal treatment, and the FEIR should include a plan for reducing noise from existing and future operations on the Blue Line.

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The City supports the Blue Line modernization program, and we believe that the DEIR generally addresses the anticipated impacts. However, we believe that the final EIR should provide more detail regarding the impacts at downtown stations, construction staging, and parking availability, and shuttle bus operations.

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Thank you for this opportunity to comment.

Sincerely,


Rina Cutler
Commissioner

RC:SB
7294T

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BOSTON
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DEPARTMENT

ONE CITY HALL PLAZA ROOM 721
BOSTON, MASSACHUSETTS 02201
(617) 632-4100 FAX (617) 632-4101

Date: May 4, 1993

To: Nancy Baker, MEPA Unit

From: Susan Bregman, Assistant Director for Transit Policy

Re: Comments on Blue Line Modernization DEIR (EOEA No. 8772)

I have attached a copy of memorandum from Marie Turlay, Assistant Commissioner of the Boston Real Property Department regarding the MBTA's Blue Line Station Modernization DEIR.

Please include these comments in the public record on this project.

Thank you.

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RAYMOND L. FLYNN, MAYOR
RICHARD A. DIMINO, COMMISSIONER

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MAY 11 1993

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Raymond L. Flynn
Mayor

City of Boston
Real Property
Department

Room 811
Boston City Hall
Boston, Massachusetts 02201
(617) 632-4100

Frank N. Jones
Commissioner

Marie A. Turlay
Assistant Commissioner

TO: Susan Bergman, Transportation Department

FROM: Marie A. Turlay, Assistant Commissioner, RPD

DATE: April 28, 1993

RE: MBTA BLUE LINE PROPOSAL FOR GOVERNMENT CENTER

Since the Boston Transportation Department is responsible for coordinating the City of Boston's official response to the Massachusetts Bay Transportation Authority's proposal to build a (T) entry on Government Center Plaza, I wish to go on record as opposing this plan.

Real Property's concerns are numerous and warrant serious consideration prior to any approval by the City. Chief among our concerns is the MBTA's long history of poor custodial maintenance in the area of their Government Center Station kiosk. In addition, another entryway will add more confusion to the plaza pedestrian foot & vehicular traffic patterns creating potential safety issues.

In conjunction with these two major concerns, effective snow removal will be an additional responsibility and headache for RPD; another entryway spells increased vendors and more trash; construction of a new station could negatively impact our planned brick replacement project; the new light poles would be subject to T patron vandalism; and another entryway could possibly attract the homeless population in the area which is currently a problem. Without the T providing the city with guarantees for improved maintenance or an operating budget for the City, this request must be rejected.

RPD still recommends that the entryway not be sited on the plaza. Instead, the (T) should be encouraged to construct on the Center Plaza side of Cambridge Street.

MAT/TS/b-5751

CC: Susan Myers, PFD
Arthur Pugsley, Environment
Bill Murray, RPD

MBTA-0-25-100-11-10
Boston Area Bicycle Coalition
P.O. Box 1015, Kendall Square Branch
Cambridge, Massachusetts 02142
(617) 491-RIDE

April 7, 1993

MEPA Office
100 Cambridge Street
Boston, MA 02202

Re: Blue Line Station Modernization Project, EDEA 8772

Dear MEPA Reviewer:

I am commenting on the project referenced above on behalf of the Boston Area Bicycle Coalition, a nonprofit citizens' group which advocates bicycling for transportation in the Boston area and all Massachusetts. We thank you for the opportunity to comment.

The Coalition has worked closely with the MBTA to develop its bikes-on-trains program and bicycle parking resources. These are particularly important in connection with the Blue Line, since all bridges or tunnels across Boston Harbor are limited access and do not permit bicycles. The Coalition has the following suggestions for the Blue Line project:

- 1) Station access should be convenient for bicycles. Typically, facilities in the stations such as ramps and elevators which provide access for people with disabilities also serve bicyclists well. Routes from streets and paths should accommodate bicycles. Particularly note the planned buffer park near the Airport station, and the potential for connecting paths there.
- 2) Parking improvements should include secure bicycle racks such as "ribbon racks," under overhangs protected from the weather, convenient to the station and in a trafficked area to discourage theft; preferably also bicycle lockers for daily commuters. The Coalition understands that the EOTC and MBTA are now considering bicycle locker installations; this project offers opportunities for them. Bicycle parking should be accessible via routes avoiding heavy pedestrian flows or automobile parking areas with much backing and turning. Bicycle parking should be located on each side of the tracks, or if access to the station is to be from one side only, bicycle parking should be on that side in order to minimize crossover bicycle traffic.

The Boston Area Bicycle Coalition once again thanks you for the opportunity to comment. Please contact me if you have any questions.

Yours truly,

John S. Allen
John S. Allen, Member, Board of
Directors, Boston Area Bicycle
Coalition

cc: Diana Farcom, MBTA
Mass. Bicycle Advisory Board



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Reply to: 7 University Park
Waltham, MA 02154
(617) 891-9307

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232 Orient Ave.
East Boston, MA 02128
March 31, 1993

Executive Office of
Environmental Affairs
100 Cambridge Street
Boston, MA 02202

RE: MBTA Blue Line Station Modernization
EOEA #: 8772
PROPOSER: MBTA

Dear Executive Secretary:

As a resident in the immediate neighborhoods of Orient Heights/Suffolk Downs, I would like to comment on several issues:

1. Traffic: Currently, during peak hours, Bennington Street is congested, particularly in the morning hours. Construction should be suspended during all peak hours, both a.m. and p.m. In the morning, many school busses service two grammar schools in the immediate area and the safety of commuting schoolchildren is paramount.

The City of Boston in the past has been reluctant to put into permanency resident parking areas to prevent outside commuters/residents from using East Boston streets for all-day parking. The City must impose a combination of residential and/or 2 hour parking areas at all of the stations along the Blue Line, in particular at Orient Heights if that station is destined to be the end of the line.
2. Commuter Shuttle: The MBTA, with the city will need to make formal commitments to actively prevent commuters from using East Boston streets in place of parking lots, or commuter shuttles. More networking and shuttling should be done from outlying communities, not the ones in which work is being proposed, i.e., East Boston Revere. The East Boston/Revere communities will be caught up in major construction projects (i.e., Central Artery, MBTA modernization, MWRA water line) and any unnecessary traffic must be prevented from entering these communities.
3. Kiss and Drop: (ORIENT HEIGHTS): There is enough useable area at the Orient Heights station to provide for 2 lanes of buses (if needed) and one DROP OFF lane which is currently prohibited by a \$100 fine. The kiss and drop as is creates a traffic hazard at the

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Page -2-

entrance of the station where busses enter.

4. Disabled Parking: Parking for the disabled needs to be carefully placed at the immediate sites, and my suggestion is that it be placed at the entrance to the station.

Thank you for the opportunity to comment.

Sincerely,

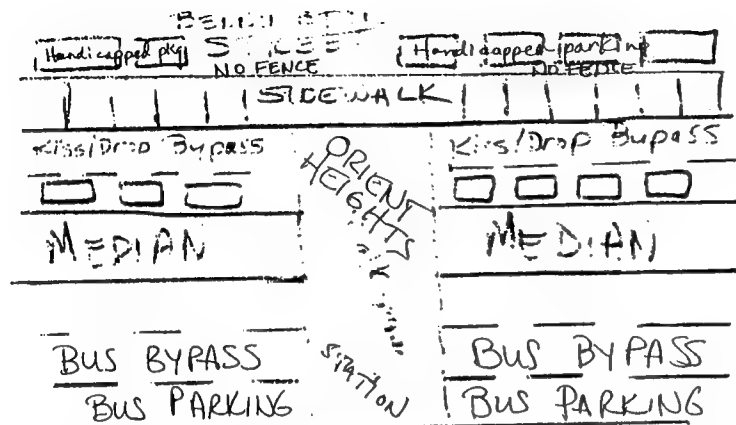
Gail C. Miller
Gail C. Miller

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Submitted by: Cashier
 Ed Miller
 32 Orient Ave East Boston

PROPOSAL FOR STATION DESIGN

Point of Pines Beach Association
33 Delano Avenue
Revere, Massachusetts 02151
May 7, 1993

Secretary
Executive Office of Environmental Affairs
100 Cambridge Street — 20th Floor
Boston, MA 02202
Attn: MEPA Unit, Nancy Baker

Re: DEIR, BOEA No. 8772, Blue Line Station Modernization Project

Dear Ms. Baker:

The Point of Pines Beach Association has some serious concerns as to the impact of the Blue Line Station Modernization Project on our community of the Point of Pines in Revere.

1. The closing of Bowdoin Station without concurrent extension to Charles Station would be extremely detrimental to a large number of riders. The excess number of automobiles that are encouraged—as a result of the closing—to travel into the central business district would be detrimental to the State Improvement Plan. State workers and others, used to convenience, would have to walk to Government Center. Elderly riders bound for area hospitals would be forced to use THE RIDE, further adding to air pollution.

Without any further structural changes, a plan could be implemented whereby the six-car trains could service Bowdoin Station. One possibility that was not considered would be simply that the inbound trains switch over to the current outbound track and discharge passengers from the first four cars only. All passengers in the rear two inbound cars could be asked to exit at Government Center. Then, after the reversal, the train would load passengers at the current discharge point into all six cars. The train would then switch back to the correct track before proceeding to Government Center. This is only one plan that might be considered. We feel that the reasons given for the closing of Bowdoin Station, even when six-car operation is considered, are specious at best.

Adding two headhouses to replace Bowdoin Station is not very helpful. We must also consider the ultimate disposition of new headhouses. A

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new headhouse was constructed at Bromfield and Washington Streets for the Downtown Crossing Station. It has been closed to entering passengers virtually all the time. I pass it every morning and cannot enter at that point. If the T cannot man its existing headhouses, what justification can there be for future headhouses? Will the fate be the same?

Bowdoin passengers currently board separately from those at Government Center. Peak-period crowding of the Government Center platform would be significantly increased with the closing of Bowdoin.

2. We support wholeheartedly the replacement of the viaduct at Beachmont Station (although the plan is not necessarily the best one as we will later discuss) but do not believe that sole reliance on a shuttle bus service is the environmentally-correct mitigation.

Instead of running 40 bus trips per hour during the peak hours, the passengers boarding at Wonderland would be far more adequately served by a temporary commuter-rail stop at Wonderland. There is a private parking lot, leased from Wonderland Dog Track, that accommodates a number of commuters who park and ride from Wonderland. They currently have to walk to the station, crossing North Shore Road at a traffic signal. These passengers would be rather reluctant to use the shuttle bus service because they have to walk a bit more, and would have a longer, less comfortable trip. Many of them will end up driving into the central business district, causing great environmental harm. It is also possible, if demand increases, to lease many more spaces from the Westwood Group, the owners of Wonderland Park, in their largely-unused south parking lot just across North Shore Road. In that case additional passenger cars or additional trains could be added.

A simple solution is to stop the following commuter trains at Wonderland to pick up passengers for North Station each weekday morning:

102 at 6:08, 154 at 6:41, 106 at 7:10, 156 at 7:34, 158 at 8:03, 060 at 8:38, and 160 at 8:44. A similar schedule is proposed for the evening and off-peak.

Each of these trains could accommodate at least 270 passengers if three cars were added. This would not inconvenience the regular riders since the Chelsea stop could be temporarily discontinued. Chelsea only serves 84 passengers the entire day.

Those trains through Wonderland would be capable of carrying 810 passengers per hour during the morning peak. The cars could be kept closed until Wonderland to accommodate the riders. The station facility

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could be a simple shelter, like the one serving Chelsea. The number of buses needed during each peak hour would be cut in half.

There are many environmental advantages to this plan:

- The number of buses passing by the Beachmont Elementary School during the time that the children are entering in the morning would cut by 50%.
- Local traffic will run much more smoothly without so many buses.
- The air pollution generated by the shuttle buses in the Beachmont and Orient Heights neighborhoods would be cut in half.
- Wonderland riders, many of whom would have to stand while riding shuttle buses stuck in traffic, would sit comfortably during the trip and experience less stressful loading and unloading.
- No transfer would be necessary for the ride into the CBD.

Furthermore, should Governor Weld's proposal for video poker gambling at horse and dog tracks become law, there would be great potential for added patronage of Wonderland Park Dog Track—which is much closer to the proposed commuter-rail station than to the Blue Line—both from the North Shore and from Boston. The station would become permanent, further justifying the minor costs associated with its opening. The management of Wonderland Park and the Westwood Group should be involved in the planning and design process for the new station and associated facilities.

3. Additional stops could also be made at Oak Island and Revere Central (between Winthrop Avenue and Railroad Avenue) during the interim. These stops would eliminate the need for transfers for many riders and avoid the loss of passengers to automobile traffic.
4. In addition, a plan is needed to attract riders from Lynn to the commuter rail. We propose that the parking fee be waived during the closing of Wonderland Station on the Blue Line. Also the fare between Lynn and Boston should be reduced to a more attractive level. Perhaps \$1.50, to equal the fare between Lynn and Boston via 441/442 bus and the Blue Line. As a stopgap measure, this would have major positive environmental impact in the Point of Pines. Currently, during peak hours our quiet neighborhood is swamped with commuter automobile traffic, a large part of which is destined for parking lots at Wonderland.
5. The 441 and 442 buses, which serve the Point of Pines (and which I ride) should all stop at Wood Island Station, so that the riders would

not need to use the shuttle bus at all. It would maintain for these riders the current level of service, where they make only one change as part of a trip to State Street.

This plan would require a commitment from the MBTA. There have been serious problems in the past with 441 and 442 buses being diverted to the Tobin Bridge, instead of the listed route. Passengers waiting in East Boston are bypassed. There is no mention in the schedule of this practice. The Point of Pines Association seeks a firm commitment from the MBTA to stop this diversion. I once waited in East Boston over two hours for a bus to the Point of Pines when the dispatcher sent the buses via the Tobin bridge. No announcement was made to the passengers waiting for the bus. Ensuring that all outbound 441 and 442 buses stop at Wood Island is an appropriate mitigation for those bus passengers.

6. Adequate thought was not given to the implications of the routing of the buses in Revere and East Boston. On Figure 1 of the January 1993 DEIR, we see a clear, much better alternate route for bus service from Beachmont to East Boston. Waldemar Avenue could be used from Winthrop Avenue in Revere to Walley Street in East Boston as part of the route. Waldemar Avenue is currently unused from the last residence in Revere until the area of Suffolk Downs Station. It might even be practical to run buses to Suffolk Downs Station via that route. Even if practicality precludes the use of Suffolk Downs station as a terminus, the route would avoid the Beachmont School and might be beneficial.

Since there is no automobile traffic on most of this street, it might even be practical to run some temporary rail replacement for the Blue Line on that right-of-way instead of buses. Existing Blue Line tracks could be used from Wonderland to Waldemar Avenue. An at-grade crossing of Winthrop Avenue would lead to the South side of Waldemar Avenue and proceed to the unused right-of-way. This was formerly the route of the Maverick to Wonderland street-car service and is for that reason still shown on the maps presented. We suggest a serious study of alternatives using that routing. There is no reason why a light-rail vehicle could not run on the line from Wonderland to a point just to the north of Beachmont Station. If a plan of that nature were devised, the environmental impact of a horrendous number of buses would be completely avoided. All that would be needed would be a temporary turnoff from the existing line to Waldemar Avenue. The terminus in that case could surely be Suffolk Downs.

7. The maps in Figures 1 and 65 of the DEIR are somewhat incorrect. They show Bath Avenue parallel to Ocean Avenue in Revere between Baker Avenue and Beach Street. Bath Avenue was removed at least 40 years ago. Revere Beach Parkway is shown as continuing well past Beach Street in a northerly direction. That is not true; Revere Beach Parkway ends at Elliot Circle. Various cross streets are shown between Ocean Avenue and Revere Beach Boulevard that have not existed for over 20 years. We would like, for purposes of correctness, to have a proper map indicating the current streets.

There are some serious errors on page II-46 of the DEIR, Section C.6, relating to Revere Beach Station. The parking restrictions on Ocean Avenue do not correspond to peak-hour traffic flow. In the north portion, parking is prohibited on both sides from 7 to 9:30 a.m. only, while in the portion south of Revere Beach Station, the only restriction is alternate-side parking from 7 to 9:30 a.m. Shirley Avenue does not intersect Revere Beach Parkway at all. Parking is permitted on one side of Shirley Avenue east of Ocean Avenue. This section is incorrect and should be reworked. There will be serious traffic problems for the shuttle buses.

In Figure 45, it is not clear how the drop-off and pick-up area at Wonderland will affect the number of parking spaces in the MBTA Ocean Avenue lot. Some clarification is requested in the EIR.

Referring to Table 1 (page II-8), we have some doubt as to whether the Sunday schedule actually maintains a 9-minute headway from 5:58 a.m. A clarification could possibly be in order. Now—as well as in 1991—there is some indication that on Sunday mornings until 10:55 a.m. only four trains are (were) in service, leading to a headway of 11 minutes.

8. In the Executive Summary of the DEIR, it is stated that the MBTA has a goal to "Operate existing level of service in a more efficient manner—more responsive to consumer needs."

This does not go far enough. As a response to the Central Artery mitigation and the lawsuit by the Conservation Law Foundation, the MBTA should also have as one of its goals to attract new passengers. The best quality of service in the history of the line is not enough—we suggest that the MBTA has to go well beyond that concept to fulfill the spirit of the mitigation settlement.

The Point of Pines Beach Association as part of its commitment to better transit and less reliance on the automobile, requests that the MBTA look into extension of the Blue Line into Central Square, Lynn.

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That is the best way to implement the improved marketing of the Lynn Garage, mentioned on Page S-7 of the Executive Summary of the DEIR. The environmental benefits of that 4.7-mile extension are tremendous. Thousands of cars would travel about 5 miles less; traffic at key points in the City of Revere would be vastly improved; air pollution in Revere would be less of a problem.

Although a commitment or final plan has not yet been approved for an extension to Lynn, it would be very unproductive, a wasteful duplication of effort, and an unnecessary waste of public funds to complete this station modernization without considering the implications of failure to redesign the project in light of a possible extension in the future.

The Point of Pines Association suggests that an extension to Lynn and the North Shore, now being studied by the MBTA, would become far more viable and efficient if—during the station modernization project—a third (or possibly fourth) track were added for future use in an express service to Lynn and beyond.

One feature that could attract Lynn riders is much faster running times. If a third track were added from just north of Beachmont Station to just after Wood Island Station, dramatic decreases in running times would attract many new riders. This would be a far better resolution of the lawsuits than merely six-car operation. An inbound train from Central Square Lynn could run express from Wonderland to Airport on the third track. It would run through Revere Beach Station (a third track is impractical there) and bypass Beachmont, Suffolk Downs, Orient Heights, and Wood Island. Running time from Wonderland to State would be reduced from sixteen minutes to less than nine minutes. From Lynn, a train to State would take nineteen minutes. That is an attractive time. The service could be reversed for the evening rush hours. That would reduce the number of automobiles in Revere and Boston.

Many running times to Boston from outlying points in 1993 are greater than they were in 1904. It is time again to display proudly the signs of yesteryear: "Rapid transit—9 minutes to State Street."

The addition of a third track is not simple; however the environmental benefits and the implications for future development on the North Shore are great. We recommend that the MBTA delay the start of this project until cost and engineering studies can be done of a third track for the Blue Line. There will be certain difficulties such as the 60-foot-wide right-of-way at Beachmont. Land taking will be required from the abutments on each side, perhaps 8 feet, maybe more. But the rest of

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the way to Wood Island is open and available land. If necessary, the unused portion of Waldemar Avenue could be used; it is not protected environmentally since it is a legal street. The bridges are often wide enough for a third track. The third track could end past Wood Island just before the tunnel.

Any Final Environmental Impact Report should address the benefits and potential benefits of making such a change in the project.

9. In the report it is assumed that headways cannot be less than three minutes for four-car trains. If headways could be reduced to two-and-a-half minutes, then the capacity of the line would increase from 7600 to 9120 passengers. One reason for the inability to run at a two-and-a-half minute headway is the lack of a turning loop at Wonderland. Since the MDC parking lot is currently vacant and is located exactly where a loop would be situated, we suggest that a cost and engineering study be done on that possibility. With that loop, the layover could be reduced at Wonderland and a shorter headway would be practical. It is possible that the purchase of three more train sets (12 cars) would allow the capacity to be increased to over 9000 passengers per hour. If the average turn-around time were reduced by two minutes, 17 trainsets could run a two-and-a-half-minute headway with the same efficiency that 15 trainsets run a three-minute headway at the present time.

Six-car trains at a four-minute headway mean in some sense a reduced level of service for the passengers. Average wait for a train increases by one third.

We remain unconvinced that a six-car operation is the only way to increase the capacity. This should be further explained in the EIR.

Summary:

We believe that

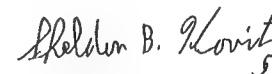
- Bowdoin Station should not be closed until the Charles connector is built.
- Commuter rail is the appropriate mitigation for the closing of Wonderland Station. It would save the environment and save the frazzled nerves of Blue-Line passengers.
- Express buses from Lynn and beyond should be required to stop at Wood Island on both inbound and outbound trips. This would reduce operating costs for the MBTA, as the number of shuttle buses could be reduced.

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- Alternatives to the routing of the shuttle buses and rail alternatives to the buses themselves should be given serious consideration. That is important to the safety and environment in Revere and East Boston.
- Constructive and innovative solutions to serve the future needs of the North Shore—the most neglected region in the rapid transit system—should be incorporated into this plan. Now is the best time to examine such proposals. A reworking of the CA/THT mitigation and subsequent Memorandum of Understanding with the Conservation Law Foundation to include such proposals is clearly in the best interest of all concerned—including the MBTA.

The project is needed and we welcome it. We merely suggest that approval not be granted before all alternatives are given proper consideration.

Yours truly,



Sheldon B. Kovitz, President
Point of Pines Beach Association

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BENNINGTON PLACE CONDOMINIUM ASSOCIATION
77 Bennington Street, Revere, MA 02151

20 April, 1993

Secretary
Executive Office of Environmental Affairs
100 Cambridge Street, 20th Floor
Boston, MA 02202

Attention: Ms. Nancy Baker, MEPA Unit

RE: Draft Environmental Impact Report
EOEA #8772
Blue Line Station Modernization Project

Dear Ms. Baker:

As we, the owners at Bennington Place Condominiums follow the progression of the Blue Line Service Improvements, we grow increasingly concerned with the issues that will directly effect our community and, specifically, our building.

The foremost issue is your proposal to add two additional cars to each train in order to allow 50% added capacity which will, undoubtedly, create 50% extra noise pollution. We are distressed about this and in particular, we have great concerns for the children and many elderly who live at 77 Bennington Street.

We do not oppose the improvements, but we appeal to you to consider the best interest of everyone involved and we respectfully ask that steps be taken to ensure that:

- * rubber tires/rubber track beds be utilized
- * train operators adhere to the posted speed limits (a practice not being currently followed at this time whatsoever);
- * a sound barrier wall be erected behind our building to assist in blocking the noise.

We fully understand and appreciate that the increased service is a benefit to the community. However, at the same time, we trust that you will not overlook our welfare.

Sincerely,



John Tomasello, Trustee
on behalf of (see attached)

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Unit 507

Shella McClorey & Carl Nazarro
Janet Alton
Paula Lombardo
Joseph & Phyllis Emmanuelle
Nancy Pennington
Anthony Frizzi
Richard & Sylvia McLaughlin
Patricio Guillen & Geraldine Pennacchio
Donna Howard
Patricia Sheridan
Leonor da Rocha
Andrew & Paula Maylor
Marle Mancuso
Alexander Santosusso
John Middlebrook
Anthony Spagnuolo
Emad Abdelmessih
Janice Tritto
Joseph Rizzuti
Joseph Maffei
Alfred & Marcia Pagliuca
Christie DeSisto
Geraldine Lewis
John Tomasello
Stephen Goldman
Steve Phillips
Dominick Greco
John Kelley
Carl Borgioli

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Secretary
Executive Office of Environmental Affairs
100 Cambridge Street
20th Floor
Boston, Massachusetts 02202

attn: MEPA Unit
Nancy Baker

RE: Draft Environmental Impact Report
EOEA # 8772
Blue Line Station Modernization Project

Dear Ms. Baker:

4/21/93

I am a home owner & resident of
172 Concord St., E. Boston & have been since
before the present Blue line existed. My backyard
which gives me some relaxation namely by gardening
but this little peace is frequently interrupted
by vibrating earth & thundering noise by passing
trains. The sound vibrates off the concrete retaining
walls of the Transitway & adjoining areas.

I have frequently been awakened in the middle
of summer nights by metallic pounding & "rattling"
in my work - neighborhood children have been
frightened by these events as if nightmares.

It is a constant annoyance while conversing on
telephone (frequent callers have asked
"what is that noise" - answer: "a passing train"), and
with neighbors and friends - we must stop conversation.
There are unnatural intrusions into one's basic
human rights & certainly, are deleterious to one's health
& peace of mind.

It is the most difficult to battle these

rumors and soundproof the abutting homes.

Sincerely,
Leo X. Callahan (M)
569-6321

101

April 22, 1993

Secretary
Executive Office of Environmental Affairs
100 Cambridge Street
20th Floor
Boston, Massachusetts 02202

attn: MEPA Unit
Nancy Baker

RE: Draft Environmental Impact Report
EOEA # 8772
Blue Line Station Modernization Project

Dear Ms. Baker:

After attending the two public meetings, and listening to most of the proposals offered, I have come to the conclusion that the first proposal that I had heard, which came from the representative from East Boston and which pertained to continuing the extension of the Blue Line to Lynn, was, in my opinion, the best proposal. This would eliminate a lot of the traffic congestion and pollution in the City of Revere and East Boston (the MBTA already has the right of way from Revere to Lynn).

With regard to the Beachmont station site, I see no traffic relief from the congestion at the intersection of Bennington St. and Winthrop Ave., (Site plan A4-1). With respect to JPA-MILNE Architect and Engineers, page A4-1, when constructing the new station, take out the existing vertical main support to the overhead structure and support it on a 45° angle support and eliminate that big radius on the corner of Bennington St. and Winthrop Ave. so as to allow the bus to make a sharp right turn at that intersection (the eastern corner of the station). That would put an end to a lot of the traffic congestion.

Move the roast beef diner to the back end of their property line. Take 10' of frontage by eminent domain so as to drive the bus to the front of the station and get it off the street.

Take a section of the first row in the MBTA parking lot on Winthrop Ave. and convert that to a bus stop for the Westbound buses. This would eliminate the bus picking up passengers on the street itself and, in turn, prevent the backup of traffic that occurs there frequently.

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Page 2 - Draft Environmental Impact Report EOEA #8772
Blue Line Station Modernization Project

When the new construction of the Beachmont station begins - to eliminate all of the traffic at the intersection of Bennington St. and Winthrop Ave. and to the Beachmont school - reroute the buses down Ocean Ave., up the Revere Beach Parkway to the overpass and down Washburn Ave. and continue to Orient Heights on the MBTA right of way - or - down Washburn Ave. to a point beyond the Beachmont school and cut over to Bennington St. and continue on to Orient Heights.

This is the second time that the station in Beachmont has had some construction work done on it in the last 40-50 years. As yet, there has been no relief for the residents from the restrictive traffic conditions that exist in this area at the present time.

I do not know what can be done regarding the congestion at this intersection but, as we all know, traffic will be greatly increased in this area on completion of the airport tunnels, and any relief for the residents, of which I am one, from the current conditions which exist at this intersection will be greatly appreciated. I do believe that one of the solutions to easing the congestion would be to eliminate the current parking on both sides of the street, which obstructs the free flow of two-way traffic at this time.

Regarding the Environmental Impact Report (EOEA #3772, page 6), I hope that there will be no more construction in the parking area to increase the parking capacity. Right now there is a gridlock of traffic at the time the school buses leave the Beachmont school and at peak hours from 6:45-9:00 a.m. and again from 3:30-5:45 p.m.

Very truly yours,

Richard D. Cazmay
212 Bellingham Ave.
Revere, MA 02151

232 Orient Ave.
East Boston, Ma
April 22, 1993

Secretary
Executive Office of Environmental Affairs
100 Cambridge Street
20th Floor
Boston, Massachusetts 02202

attn: MEPA Unit
Nancy Baker

RE: Draft Environmental Impact Report
EOEA # 8772
Blue Line Station Modernization Project

Dear Ms. Baker:

Additional comments to be considered
by the undersigned:

1. Winthrop buses should be dropping off and
picking up passengers at the Barbours
Avenue side of the station. (107)

2. Permanent traffic/parking mitigation
must include a component by the City
of Boston whereby restrictions preventing
parking on East Boston streets becomes
permanent. Parking for East Boston residents
can be accommodated by 2 hr. parking or
residential ~~parking~~ designations on
the streets particularly close to all East
Boston stations. (108)

3. See attached design for Orient Heights
station.

Sincerely,
Gail Miller

4. Wonderland Station may be looked
at as the first station to be rehabbed
using Orient Heights for the reverse
direction process only while Wonderland
is being updated. (109)

Then, once that station is finished,
reopen the whole line skipping
those that are being repaired.
This may not be feasible at all
but perhaps could be looked at.

5. Soundproofing can serve to reduce
the noise produced by a somewhat
antiquated train system as one
mitigating measure. (110)

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MAY 6 1993

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(N3)

May 4, 1993

Executive Office
100 Cambridge St.
Boston, MA 02202
Attention: Ms. Nancy Baker, MEPA unit
project #EOEA #8472

Dear Ms. Nancy Baker,

I am writing this letter to you in concern of the problem I and many others have with the M.B.T.A. I have owned my home located along the side of the M.B.T.A tracks for 7 yrs. Now located at 158 Wardsworth St. East Boston, MA 02128. I have called the M.B.T.A police regarding a problem that comes along year after year with young children climbing over the broken down foot bridge and many times hanging and swinging over passing trains.

I have called the M.B.T.A also because 3 ft. along the fence erected on their property abutts my

property is M.B.T.A land. The fence owned by M.B.T.A is so old and at one point is only 3 ft. in height. I erected a 6 ft. stock and fence but it still leaves the problem of the deteriorated fence on M.B.T.A. property. Gentlemen from M.B.T.A. came and observed this problem 4 yrs. ago and it still remains the same.

Now comes the problem of crated walls, window seals broken and my cellar rambling from M.B.T.A vibrations. I have new windows through out my house. I have also insulated my walls completely, the noise is not that bad, but when a window is opened in the Spring and Summer I cannot hear on my phone, I can not watch T.V. and I can not sleep at night. Also my three young children can't

(111)

sleep at bedtime (8pm).
My company does not
understand how I live
with the noise. (family
barbeques.) I have tried
in good faith to sell
my property but again
the noise of the M.B.T.A.
does not attract potential
buyers.

Mr. Serra and Mr. Chavaglini
are trying to help this
situation. My only advice
and solution would be
to sound proof the tracks.
Trains with rubber wheels,
new windows / question?

Sincerely,
Mr. & Mrs. Whitaway
158 Wordsworth St.
East Boston, MA 02128

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May 4, 1993

Dear Mr. Baker, MEPA

I am writing to you in regards to the M.B.T.A. Modernization Plan. I own a three family dwelling on 1144 Kennington St. in East Boston and my home, along with a few others, is directly across the Blue Line tracks that go to Woburn one way and to Boston the other. The noise is so disturbing that we were thinking of moving out of East Boston, but we love here and at our ages, the Mrs. and I and also our married children, we are in no position to leave here. If the M.B.T.A. wants to modernize, I think it

(112)

would be fair to soundproof the home. I do hope that the M.B.T.A. takes this in consideration.

Thank You

James Salvaggio

1144 Kennington St.

East Boston

P.S.

The project number is

EOEA #8872

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May 4, 1993
Project Number
EUEA # 8772

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MEFA The Blue Line Modernization Committee,

I own a home and reside at 1106 Bennington St.
E. Boston directly across the street from the blue line car barn.
The trains go by all day long, it is exceptionally noisy during
the morning and evening rush hours especially at 5:30 A.M.
when the trains are turning and being put into operation and
between 12:30 A.M. and 1:00 A.M. when they are being taken out
of operation for the evening, they make a loud squeaking
noise waking us up almost every morning and evening
when we are trying to get some sleep. We can not watch
T.V. because when the trains go by they make so much
noise even when our windows are closed we
cannot hear what is being said from the T.V. We
cannot sit in our living room with company visiting
us because we cannot have a normal conversation
with them for every time the trains go by we have
to stop talking until they pass. When the trains
go by my T.V. cuts out from the overhead ^{power} wires
arcing. We are also robbed of our sleep by the workmen
working on the blue line all through the night at
times. My husband has had a heart attack and the
frustration from all the noise and the interruption of
his sleep is detrimental to his health. I have deep
concerns about the new modernization and implementa-
tion of more trains into service. I would
favor

(113)

like to have my house soundproofed for
our emotional and physical well being.

Thank You

Mrs. Josephine "Ade"
1106 Bennington Street
East Boston, Mass. 021

May 5, 1993

N3

Ms. Nancy Baker
Executive Office of
Environmental Affairs
100 Cambridge Street
Boston, Ma. 02202

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Dear Ms. Baker:

I write this letter and sit in my living room at 732 Bennington St. in East Boston. It happens to be a relatively warm evening so I have one window opened about 8 inches. I have already heard 3 T-trains roar by and have also heard the distinctive sound of a bus pulling up to a nearby bus stop.
(It's now 4 trains)

I use the T frequently and am happy about improved public transportation. However, the fact is that my neighborhood is adversely affected by noise and the quality of living is diminished here because of this noise. (5 trains)

I very definitely feel that a soundproofing program is indicated as a natural adjunct to the T's modernization program for my area.

I would be happy to answer any questions about particular noise in my immediate neighborhood.

Sincerely,
Jan Stanopolski

(114)

Executive Office of Environmental Affairs,
100 Cambridge Street,
Boston, MA.
Attn: Ms. Nancy Baker, NEPA Unit.

Re: Project NECEA #2772.

Dear Ms. Baker:

Encl. (1) My letter to Mr. Salvucci dated 6/24/88.
(2) Residents letter to Rep. Serra dated 9/26/88.

Enclosures (1) and (2) are submitted as an interim solution to the noise problem in the Harbor View area until the Sound Program suggested by Rep. Serra is implemented. The Sound Proofing Program, since this area is not covered by the Sound Proofing Program, is heartily endorsed by the residents.

Sincerely,
James R. Donovan
James R. Donovan

(N3)
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MAY 6 1989
MEPA

(115)

104 Cowper Street
East Boston, Massachusetts 02128
June 24, 1988
(617) 569-0198

Mr. Frederick Salvucci
Massachusetts Secretary of Transportation
Transportation Building
10 Park Plaza
Boston, Massachusetts

Dear Mr. Secretary:

Early last year, while talking to you, I mentioned that the Harbor View area of East Boston had a serious problem with loud and irritating noises caused by the Blue Line trains that travel between the Byron Street bridge and Wood Island Station. At that time you suggested that I gather the facts together and forward them to you so that the problem could be presented to the MBTA management for resolution. Since that time, several meetings have been held by the residents in the immediate area of Cowper, Moore, Short and Coleridge Streets, and the following information is forwarded as you suggested:

Trains in both directions travel through a reverse "S" curve between the Byron Street bridge and Wood Island Station with the mid-point near Moore Street. With the exception of rush hour traffic, the trains travel through the curve at 40 mph on a regular schedule starting at 5:15 a.m. and ending at about 1:15 a.m. the following morning. During that time the adjacent residents are subjected to a variety of loud, irritating and sometimes unbearable noises. The noises include the roar of the train as it enters the curve heading inbound, the screeching of the wheels along the rails, the rattling of the undercarriage and from some cars in the train that appear to have flat wheels (examples - 0620-0621, both of which were reported to the MBTA in the past). In addition there have been incidents of flying rocks being propelled through the chain link fence into the yards at 95 and 99 Cowper Street.

Residents adjacent to the area recommend the following two-step approach to solving or mitigating the noise problem: In step one reduce the train speed to a maximum of 25 mph between Byron Street bridge and Wood Island Station, provide continuous lubrication to the tracks throughout the curve and remove and/or repair the cars with noisy undercarriages or wheels on a more timely basis. The changes would add

Encl. (1)

Mr. Frederick Salvucci
Page 2
June 24, 1988

15 seconds or less to scheduled runs and costs would appear to be minimal. Step two requires the attaching of sound dampening material to the existing chain link fences between Moore and Byron Streets (both sides). A similar wooden fence has been attached to the chain link fence in back of the new houses at Neptune Circle. This has proven highly effective in noise abatement.

Installation of sound dampening material in combination with speed limitations, in addition to further reducing noise pollution, would provide some relief and recompense to the residents of 95 and 99 Cowper Street located within 15 feet of the tracks. These residents of over 35 years have borne the burden of extensive noise pollution after having their houses relocated to the present locations to facilitate the installation of the Blue Line.

It is well to remind all concerned that the noise generated by the Blue Line is not only nerve racking, irritating, and mostly unbearable (especially in the warmer weather with the windows open), it also covers a 20 hour period each day, every day of the week, every week of the year. Runway 15-33 at Logan our other source of more intense noise pollution is active three times daily between 7:00 a.m. and 11:00 p.m. over a ten month period and we have hopes for a reduction in this pollution in the future.

If more information is required in resolving the noise problem, I will be available to provide whatever assistance is needed.

In closing I would like to thank you for your concern with this problem and your many efforts in helping the residents of East Boston in the past.

Sincerely yours,

James R. Donovan

JRD:amd

September 26, 1988

The Honorable Emanuel G. Serra
Massachusetts House of Representatives
State House
Boston, Massachusetts 02133

Re: Noise pollution from Blue Line trains between Byron Street
and Wood Island Station (East Boston)

Encl: (1) Mr. Donovan's letter to Mr. Salvucci of 6/24/88
(2) Mr. John K. Leary's letter to Mr. Donovan of 8/19/88

Dear Representative Serra:

As residents of homes adjacent to the affected area, we feel that enclosure (2) does not properly address the problems noted in enclosure (1), since the conditions cited are unique to this area, are not normal, and should be considered without reference to other neighborhoods.

We also believe that speed plays a large part in the noise pollution since there is an appreciable reduction during rush hours when trains travel at slower speeds that seldom exceed 25mph.

To date there has been no relief from the screeching along the rails which had been attributed to the extreme heat, however, for the past five days the length and intensity of the noise has increased even with the drop in temperature. We are aware that Massport installed the wooden fence at Neptune Circle and mentioned it only as a good example of noise abatement.

We hope that through your efforts our request for relief from this long term noise pollution will be realized.

Sincerely,

James R. Donovan 95 Cowper St.
John K. Leary 95 Cowper St.
Anna Cronin 49 Cowper St.
Harold J. Bibeau 94 Cowper St.
Frank J. Bibeau 4 Shore St.
John J. Bibeau 4 Shore St.

Encl: (1) and (2) are forwarded at your request

Albert Vitello 106 Cowper St.
Anthony A. Vitello 111 Pine St.
Harriet Vitello 106 Cowper St.
Encl (2)

James R. Donovan 104 Cowper St.
Thomas Lenton
113 Moore St

Mr. Nancy Baker
778 P.D. Unit
Project # EOB# 8272

RECEIVED
MAY 6 1993
MEPA

As a resident of 184 Copper St for the past 65 years I have seen the development, construction and implementation of service on the Blue line. The proximity of the tracks are less than 10 feet from my property line, no further than 70 feet from my home.

Over the past ten years the frequency and scheduling of the trains have made living here increasingly less enjoyable. The vibrations have caused both structural and cosmetic damage to both the interior and

exterior of my home. The noise level virtually eliminates my ability to hold any audible phone conversation. I have become quite proficient at reading lips, while attempting to watch television programs. We are forced to keep the windows closed tightly during the even hours as the trains and work cars continually roll down the tracks.

As you look toward revitalizing the Blue Line I feel you should begin with the people who for the past 40 years have endured the noise, vibrations,

(116)

and general inconvenience the
the Blue Line has caused.
the residents of East Boston
hope that you will give
serious consideration to the
implementation of a sound
proofing project as a
gesture of good will to the
people who are your
neighbors

Sincerely

Shula I. Mullen

SATURDAY
MAY 8TH, 1993

To:

BELOW ARE THE NAMES & ADDRESSES OF A
FEW OF MANY PEOPLE THAT ARE CONCERNED
ABOUT THE BUSING AND NOISE POLLUTION
THAT IS CAUSING HAVOX AT THE ORIENT
HEIGHTS MBTA STATION, EAST BOSTON, MA.
MOST OF THE PEOPLE ARE ABUTTERS IN
THIS AREA & ARE CONCERNED ABOUT THIS
SITUATION AND ALSO THE LONG RANGE NOISE
& POLLUTION ESPECIALLY IF THE BEACHMONT
MBTA STATION IS DEMOLISHED.

(117)

THIS LIST IS BEING SENT TO:

✓ MS. NANCY BAKER

MASS. ENVIRONMENTAL PROTECTION
AGENCY, 100 CAMBRIDGE ST.

20TH FLOOR, BOSTON, 02202

& TO: REP. GUS SERRA ✓

✓ SENATOR ROBERT TRAVAGLINI

✓ CITY COUNCILOR JOHN NUCCI

WHO REPRESENT THE PEOPLE OF EAST BOSTON.

THESE SIGNATURES WERE OBTAINED BY

MR. PASQUALE CAPALDO (TEL. 569-2400)

24 BARNES AVE. E. BOSTON, MA. 02128

A VERY CONCERNED TAX PAYER.

THANK YOU, ALL, FOR YOUR HELP!

JOE ROCCIOLLO, 1044 SARATOGA ST.

E. BOSTON, MA. 02128 (TEL. 567-4585)

Lisa Mangione 57 Barnes Ave. E. Boston
7th Marston 16 Barnes Ave E.B.
Michael DiSessa 12 Barnes Ave E.B.
Ellen DiSessa P Barnes Ave E.B. #2
Josephine Criffi P Barnes Ave. E.B. #1
Josephine Criffi 8 Barnes Ave E.B. #1
Corinne Farga 17 Bedford Rd. Malden
Anthony Spina 300 Chelsea St
Anthony Spina 33 Broad St E.B.
Mary Jenkins 300 Chelsea St E.B.
Janet Vincente 32 Barnes Ave. E.B.
Josephine Criffi 32 Barnes Ave E.B.
John DiNelle 36 Barnes Ave. E.B.
Ruth DiNelle 36 Barnes Ave. E.B.
Mary Salvatore Quam 30 Barnes Ave. E.B.
Frank J. Lucitarone 32 Barnes Ave E.B.

Carol Lino 1044 Santa Rosa St E.B.

1 Dana Mustore 300 St Edward Rd
Light Anne Mustore 300 St Edward Rd
Nina Bone 300 St Edward Rd
Frank Fagore St Edward Rd
Carmel A. Bonetto 44 St. Edward Rd E.B.
John Mariut pull 45 St. Edward Rd. E.B.
John Blakely 102 BARNES AVE E.BOSTON
Michael Costello 102 Barnes Ave. E Boston
Marguerite Costello 102 Barnes Ave. E.B.
Theresa Vannolan 102 Barnes Ave. E.B.
Danie Mayhew 44 St. Edward Rd E.B.
Donna J. Mattee 44 St. Edward Rd E.B.
Louis Marro 106 Barnes Ave E.B.
Mr Joe Marro 106 Barnes Ave E.B.
Alice Red 95 Barnes Ave. E. Boston
Richard Red 95 Barnes Ave. E. Boston
Jennifer Red 95 Barnes Ave. E. Boston
Robert Red Jr. 95 Barnes Ave. E. Boston
Robert Redmond, 52 BARNES AVE E. BOSTON
Enrico & Gloria Vico 74 Barnes Ave E. Boston
Anthony J. Amico 70 " " " "
Anthony V. Lucido 6211 " " " "
Walter Lucido 62 " " " "
Guth Santiano 53 Barnes Ave

Secretary
Executive Office of Environmental Affairs
100 Cambridge Street
20th Floor
Boston, Massachusetts 02202

attn: NEPA Unit
Nancy Baker

RE: Draft Environmental Impact Report
EOEA # 8772
Blue Line Station Modernization Project

Dear Ms. Baker:

I attended the meeting at the Grant
Heights Upright Club last night. Again the
people of East Boston were about-changed. This
is the final day to register our comments
regarding your modernization plans.

I reside at 151 Conover St., between Brewer
and Wendenburg streets, across the street
from the MBTA. We have resided here for
46 years as we can tell you that the MBTA
trains have been getting noisier and noisier
what we are talking about

Soundproofing homes is a good plan but
like open windows in the good weather. It
is now we can't hear our TV, talk on the
telephone from our home because of the noisy
trains. If we are outside and a neighbor try
to pass the time of day - you cannot hear the
conversation. We must realize when talking
to come one upon a generally standing alone
in a room - and cannot hear the other person

on MBTA property are chain link fences
that do not act as buffers. How about
planting trees to absorb some of the noise?
How about maintaining the MBTA
equipment? I think this is the most important mo.
I can honestly say your trains are
noisier than the planes flying overhead.
Believe me that is noisy.

There are just a few of my thoughts
on the subject. I hope something can be
done to alleviate this situation. What are
the long term results of this kind of
environment on the hearing of the children
in the neighborhood?

Sincerely
Ugnis Kennedy

(118)

90 Nancy Baker MEPA Unit
Dear Sir: - # 8772

5/4/93

(NB)

I John H. Callan age 82 home.
lived along side of these rails for over
80 years. The noise at times gets to the
neck and. I wear a hearing aid and that
makes the noise twice as bad.

When this modernization is completed and
we get the six tracks, the noise will be
50 to 60 pounds, which I think will tear the hair
off us senior citizens.

Yours truly
John H. Callan
210 Byron St
East Boston, MA 02128

EOEA # 8772

RECEIVED

MAY 6 1993

MEPA

(130)

RECEIVED

MAY 11 1993

MEPA

NB

May 11, 1993

Executive Office of Environmental Affairs
100 Cambridge Street
Boston, MA 02202

Attention: Ms. Nancy Baker (MEPA Unit)

Dear Sir:

This letter is in reference to project number EOEA/8772, the
modernization proposal of the MBTA's. I live at 189 Wordsworth
Street, East Boston and as an abutter of the MBTA tracks I am sure
that the noise situation will escalate if this project is
accomplished without soundproofing my neighborhood.

I would urge that John Haley, General Manager for the MBTA
consider the possible refocusing of the modernization project to
include soundproofing.

Sincerely,

Diane C. O'Hara
Diane C. O'Hara
189 Wordsworth Street
East Boston, MA 02128

(131)

To Mr. Nancy Baker

RECEIVED

MAY 1 1981

MEPA

(NB)

My name is Mrs. Frances Hopley
107 Moore St
East Boston Mass 02128

I would like to talk about
the trains on the Blue Line,
know between the planes, train, there's
enough noise between the two, I don't
know how much more we can take.
That's my opinion. It would
be nice if something could be
done about it.

The project number is EOEFA #8772

Thank you
Mrs. Hopley

(132)

RECEIVED

MAY 1 1981

MEPA

NB

From: The DePaolo Family
+ Teresa Jayne apt

ATTN: Ms Nancy Baker

I am writing about the project number
(EOEFA #8772) at 85 Chelsea Street
East Boston, concerning the Blue Line.

The noise situation and vibration
is simply unbearable, unlivable and
becoming very, very stressful. Last
week as the train went by which
is under my home a vase of
flowers dropped to the floor not
to mention a number of complaints
and damages caused by the MBTA.

I thank you for the support
concerning this situation on the
Blue Line

Sincerely
The DePaolo Family

(133)

RECEIVED

MAY 1 1977

MEPA

Mrs. Renee Finn
1122 Bennington Street
East Boston, MA 02128
569-8217

Executive Office of Environmental Affairs
100 Cambridge Street
Boston, MA 02202
ATTN: Ms. Nancy Baker
MEPA Unit

RE: Project # EOEAS8772

Dear Ms. Baker:

I have been a resident of 1122 Bennington Street in East Boston for 9 years. I am writing to you today to ask for your help in the problem that I have with the noise of the Blue line trains. My house is directly across from the Blue line. I hear the trains beginning at 5:00 A.M. in the morning until 1:00 A.M. the next morning. This leaves only 4 hours of peace and quiet for me and my family to sleep.

Some of my other concerns are that it's virtually impossible to hear my television when a train is passing by; talking on the telephone is also annoying; it's hard to hear my children talk unless they're speaking loudly. This has me concerned about their hearing, and what the long term effects of this noise may have on them.

With all of this, I believe that some kind of soundproofing is long overdue. For the MBTA to go ahead with modernization plans without soundproofing is ludicrous. I do hope that you have an opportunity to look into this problem further, on behalf of myself and other residents that are impacted by the noise of the Blue line trains.

If I can be of any assistance to you, please feel free to call me. Thank you.

Sincerely,

Renee Finn

Mrs. Renee Finn

(134)

Ms. Nancy Baker
Massachusetts Environmental Protection Agency
100 Cambridge Street, 20th Floor
Boston, MA 02202

RECEIVED

MAY 1 1977

MEPA

PETITION

We, the undersigned residents of Barnes Avenue, East Boston, Massachusetts do hereby set forth our concerns and complaints with regards to the proposed renovations of the Blue Line and using Orient Heights station as the terminus of the Blue Line.

We, the residents of Barnes Avenue are urging the MBTA to reconsider its plans in view of the effect they will have on area residents. The major areas of concerns are:

1. Noise pollution. Trains start at 5:00 a.m. and continue to run until 1:00 a.m. limiting the hours of sleep to only four hours. While this is already intolerable, with the increase of four to six cars to move an increased number of passengers to 11,000 per hour, it will become impossible to endure.
2. Instituting bus service to move the passengers which will utilize 40 buses per hour. This will create a dangerous air pollution problem for the residents as a result of the carbon monoxide and diesel fuel fumes we will be forced to ingest as we breathe.
3. While the project will be undergoing the renovations, the quality of the air will be additionally reduced as a result of the dust which finds its way into the homes and everywhere, creating health problems for young children and the elderly in particular.

(135)

(136)

(137)

Respectfully submitted,

Rosmary Spaleo
Joseph Acciardo
Joe Mangano
Patricia Mangano
Maya Mangano
Paul Mangano
Michael Mangano

24 Barnes Ave E.B.
1044 Sprague St E.B.
1041 Sprague St E.B.
57 Barnes Ave E.B.
28 Barnes Ave E.B.
28 Barnes Ave E.B.
28 Barnes Ave E.B.

Secretary
Executive Office of Environmental Affairs
100 Cambridge Street
20th Floor
Boston, Massachusetts 02202

attn: MEPA Unit
Nancy Baker

RE: Draft Environmental Impact Report
EOEA # 8772
Blue Line Station Modernization Project

Dear Ms. Baker:

I HAVE A BUSINESS AT 917 PENNINGTON ST. WHICH
HAS BEEN AFFECTED DRASTICLY BY THE TRAINS, NOT
ONLY THE BUSINESS BUT THE STRUCTURE OF MY
BUILDING HAS BEEN DAMAGED SEVERELY. THE
BUSINESS ~~THE~~ IN QUESTION IS A FUNERAL HOME & IS
VERY DISTURBING TO THE CREATING FAMILY,
AND THEY CHOOSE NOT TO USE THE FUNERAL
HOME, AND I ALSO KNOW OF OTHER BUSINESS
THAT ARE AFFECTED ALSO.

I WOULD LIKE TO STATE THAT ALL
BUSINESS PEOPLE WILL FIGHT ALONG WITH
THE RESIDENCE AFFECTED BY THE BLUE
LINE.

THANK YOU
Benito Tauro

You are welcome to
visit at any time.
Thank you.

President of E. Boston Cha.
Benito Tauro
569-0305

(138)

Secretary
Executive Office of Environmental Affairs
100 Cambridge Street
20th Floor
Boston, Massachusetts 02202

attn: MEPA Unit
Nancy Baker

RE: Draft Environmental Impact Report
EOEA # 8772
Blue Line Station Modernization Project

Dear Ms. Baker:

I am a resident of 917 Pennington
St directly behind the Blue line
which is my back yard.

My Apt. has been severely renovated
in a matter of one week time
the walls & ceiling are cracked.
Not to elaborate on the noise, my
kitchen table hasn't been in the same
spot for one time, eating is almost
impossible. the noise is unbearable,
and its impossible for me to open
my sliding glass door.

I am thanking you in
advance for your immediate
attention.

Benito Tauro
(617) 569-7750
MARK TAURO

(139)

Secretary
Executive Office of Environmental Affairs
100 Cambridge Street
20th Floor
Boston, Massachusetts 02202

attn: NEPA Unit
Nancy Baker

RE: Draft Environmental Impact Report
EOEA # 8772
Blue Line Station Modernization Project

Dear Ms. Baker:

MY CONCERNS INCLUDE NOISE AS WELL
AS AIR POLLUTION. YOUR TEMPORARY BUSIN-
PLAN STATES 24 BUSES WILL MAKE 40
TRIPS PER HOUR DURING PEAK HOURS. ...
HOW WILL THIS IMPACT THE AIR WE
ALL BREATHE. I'M SURE IN A NEGATIVE
MANNER...

I'M SICK AND TIRED OF NOT
GETTING A FULL NIGHT SLEEP. SOMETHING
MUST BE DONE FOR THE PEOPLE OF E. BOSTON
SOUNDPROOFING A MUST.

DIANA GRAY
117 CANTER ST
E. BOSTON MA 02128

(140)

(141)

7/11/87 Mr. Joseph ...
37 Barrow St.
East Boston, MA 02128
567-6270

Secretary
Executive Office of Environmental Affairs
100 Cambridge Street
20th Floor
Boston, Massachusetts 02202

attn: NEPA Unit
Nancy Baker

RE: Draft Environmental Impact Report
EOEA # 8772
Blue Line Station Modernization Project

Dear Ms. Baker:

- 1) we don't get four hours a night sleep
- 2) Train is so noisy it is a nuisance especially at night
- 3) my walls are all cracked
- 4) Have called many times - don't get answered
- 5) House shakes
- 6) when I don't see confirmation that a train is making
just as much noise as the T.
- 7) noise affecting my hearing
- 8) Back of my head on my neck when in back of head
trains begin
- 9) can't watch television
- 10) can't talk on phone
- 11) Trains practically in my yard - can't enjoy
summer barbecue or company
- 12) Try to sleep when on train like Canada Pass.
- 13) Please soundproofing - we need a sound barrier at the fence
- 14) Can't enjoy a cup of coffee with guests

(142)

Secretary
Executive Office of Environmental Affairs
100 Cambridge Street
20th Floor
Boston, Massachusetts 02202

attn: MEPA Unit
Nancy Baker

RE: Draft Environmental Impact Report
EOEA # 8772
Blue Line Station Modernization Project

Dear Ms. Baker:

I live at 99 Cooper Street in East Boston.
This is next to 'Blue Line' tracks.
As the trains go into Boston -
Rockers fly into my yard.
Vibrations of our home is terrible.
The noise is unbearable in
summer if a window is open.
Some wires holding lines above
tracks - have fallen in our
yard.
Some vibrations from trains
have cracked our windows.
Vibration causes items to be
knocked off shelves.
We need a buffer + sound proof
before any
as the Blue Line modernization
since escalators (Maverick + Agave)
are not working.

Mr. J. Parolyn A. Bobrek
99 Cooper St., E. Boston, MA
02128

(143)

Secretary
Executive Office of Environmental Affairs
100 Cambridge Street
20th Floor
Boston, Massachusetts 02202

attn: MEPA Unit
Nancy Baker

RE: Draft Environmental Impact Report
EOEA # 8772
Blue Line Station Modernization Project

Dear Ms. Baker:

I live on Homer Street in
East Boston and I would like to
register my complaint of the noise
of the trains as they travel the
Blue Line.

I think the houses should
be sound-proofed so that the
people of East Boston can have some
peace & a quiet & a better quality of
life.

Volunteer Capriles
91 Homer St
E. Boston, Mass
569-3669

(144)

Secretary
Executive Office of Environmental Affairs
100 Cambridge Street
20th Floor
Boston, Massachusetts 02202

attn: MEPA Unit
Nancy Baker

RE: Draft Environmental Impact Report
EOEA # 8772
Blue Line Station Modernization Project

Dear Ms. Baker:

*My name is Jane Vieira. I live at
87 Homer St. C.B. I came to this area only
after fighting many years. Now Port Authority
has a good address than Neptun Bld. As we
all know what happens to Neptun Bld. when
I came to the Harbor View Area. I thought all
my main problems would be over. When I
now have to contend not only with still
the plans, I also have to contend with the
MBTA. I was driven out of my home on
Neptun Bld. Please take care of these
problems before any future plans with
your project. Please don't make this for
me anymore. Neptun Bld.*

Let's see some action not just meetings + words

*Jane Vieira
87 Homer St.
C.B. Ma. 02128
569-0957*

(145)

Secretary
Executive Office of Environmental Affairs
100 Cambridge Street
20th Floor
Boston, Massachusetts 02202

attn: MEPA Unit
Nancy Baker

RE: Draft Environmental Impact Report
EOEA # 8772
Blue Line Station Modernization Project

Dear Ms. Baker:

*I feel that the people
of East Boston have suffered enough
from the noise of the trains, the
trafficking, etc. It is about time that
the T does something for the people
before they start the project on the
Blue Line.*

*Ida Karnici
90 Homer Street
East Boston, Ma. 02128*

(146)

Secretary
Executive Office of Environmental Affairs
100 Cambridge Street
20th Floor
Boston, Massachusetts 02202

attn: MEPA Unit
Nancy Baker

RE: Draft Environmental Impact Report
EOEA # 8772
Blue Line Station Modernization Project

Dear Ms. Baker:

I am a mother of 3 children under the age of 4 - they can hardly play in their yard because of the sound of the trains/planes and automobiles. The noise makes it very hard for them to communicate with me at each other. If you don't care about the people of East Boston think of the children.

I can't even open my windows at night because my children and myself can't sleep.

"Please help us to improve our life."

Thankyou

Sharon A. John.
69 Homer St.
East Boston Mass.
02128.

(147)

Secretary
Executive Office of Environmental Affairs
100 Cambridge Street
20th Floor
Boston, Massachusetts 02202

attn: MEPA Unit
Nancy Baker

RE: Draft Environmental Impact Report
EOEA # 8772
Blue Line Station Modernization Project

Dear Ms. Baker:

My husband and I are residents of 183 Wardsworth St. E.B. We attended the meeting last night at the O.H.C. to no avail. We were told nothing, nothing about any problems or solutions to them. The noise in our area and our house is always starting before 6pm every morning so get the under the front and at alarm clock anymore, the train is that. Why not put a 2 mile stretch of tracks looking out? We are lucky we can sleep quite. Sleep time. We have tried to make legitimate complaints. Just nothing is a start.

(148)

Mrs. Mrs. Dominick Prochilo
183 Wardsworth Street
E.B. Mass.

Secretary
Executive Office of Environmental Affairs
100 Cambridge Street
20th Floor
Boston, Massachusetts 02202

attn: NEPA Unit
Nancy Baker

RE: Draft Environmental Impact Report
EOEA # 8772
Blue Line Station Modernization Project

Dear Ms. Baker:

I am 53 years old & wish they
would do some thing to stop the
noise from the train and the
planes I am a widow I would
at least take care of my house I am
a widow I can not afford to fix
the clock in my walls I have lived
there 53 years
my windows, louvered manna
saddle, terrible
96 - corner st

(149)

Secretary
Executive Office of Environmental Affairs
100 Cambridge Street
20th Floor
Boston, Massachusetts 02202

attn: NEPA Unit
Nancy Baker

RE: Draft Environmental Impact Report
EOEA # 8772
Blue Line Station Modernization Project

Dear Ms. Baker:

I've recently purchased a home on Barnes Avenue
which is directly parallel to the Orient Heights
train garage and MBTA parking lot.

I am the 2nd home from the parking lot
entrance & have heavy traffic Dunlop peak
hours passing by my home.

The most irritating noise is that of the
trains pulling into and out of the garage.
The screeching and clanking occurs at
5:00 a.m. and 1-2 a.m. which means
that I am awakened at 1-2 a.m. by the
screeching brakes, then again at 4:30-5:00 a.m.
which leaves 3 hours of actual sound sleep
if I'm lucky to fall back from 2 a.m.

I must also mention the lights in the
parking lot that shine through my windows all night
Maria Shea 88 Barnes
East Boston

(150)

Secretary
Executive Office of Environmental Affairs
100 Cambridge Street
20th Floor
Boston, Massachusetts 02202

RECEIVED

MAY 11

MEPA

attn: MEPA Unit
Nancy Baker

RE: Draft Environmental Impact Report
EOEA # 8772
Blue Line Station Modernization Project

Dear Ms. Baker:

I am a resident at 174 Cowper St. in East Boston and have lived here for many years. The noise from the trains is intolerable all year round but especially in the upcoming months of summer when the windows are open for a breeze. It is impossible to talk on the phone, watch T.V. and even sleep at times due to the rumbling of the trains.

I realize it is my decision to continue to live where I live. but I would hope as my neighbor, The BLUE LINE, modernizes that it could do so with its neighbors in mind. The noise pollution from the trains and PLANES has probably impacted my hearing as well as my family. Please help our community to improve the quality of life.

Thank you for caring.

Charles Marcello

(151)

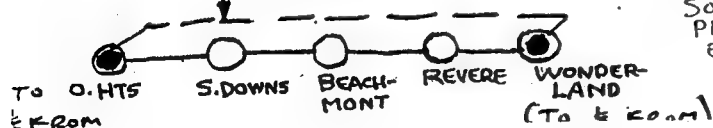
MBTA - BLUE LINE MEETING [APRIL 21] ① 1993

EAST BOSTON TIMES
Free Press - Leader
EAST BOSTON'S
OLDEST
NEWSPAPER

WEDNESDAY,
APRIL 28, 1993

Distributed FREE of
Charge in
East Boston and
Winthrop
Established in 1886
(617) 567-9600
(617) 567-0900

IN 20
MINUTES
40 BUSES
AT PEAK
HOURS &
DAILY
SERVICE



MBTA modernization plan angers Eastie residents

by Marie Matarese
Once again Eastie is being faced with the possibility of increased traffic through its streets, more noise and chaos during the construction of Mass. Bay Transportation Authority's Blue Line Modernization Plan.

A meeting was held last Wednesday evening with more than 150 people that crowded into the Orient Heights Yacht Club to respond and voice their comments to the expected noise, increased traffic, pollution, policing and maintenance required during the renovations that are scheduled to begin in the spring of 94 with the bulk of construction spilling into 95 and there after.

Anxious residents waited to listen to what the eight M.B.T.A. member committee including Environmental Manager, Jane Chimeilinski; and Lynn Wylder, Deputy Manager of Construction had to say. The community response was so substantial that the T's plans to present a slide show were halted in order to give the community more time to appeal directly to the board.

During peak commuter hours between 7-9 a.m. and 4:00-6 p.m. project plans are that 40

buses are expected to leave Wonderland station and head to each Revere station before disembarking passengers at the Orient Heights station, which sits in a bottleneck at the intersection of Bennington and Saratoga Streets, two of East Boston's busiest thoroughfares.

Representative Emanuel G. Serra (D-East Boston) and Senator Roben Travaglini (D-East Boston) were the first to address the inclusion of a soundproofing program for East Boston homes in the M.B.T.A.'s three hundred and fifty million dollar Blue Line renovation plans.

Representative Serra was first to speak, citing the homes along the tracks have endured a lot over the last several years. Commuters from outside the city are shuttled through this community on their way downtown while East Boston residents have had their homes rendered unlivable. I cannot believe that a project this big can't include four million dollars to repair East Boston homes. Four million is all it would take to soundproof and correct the structural damage to about two hundred homes along the

Continued on page five

COST
\$350
MILLION
DOLLARS

\$4
MILLION
DOLLARS
FOR
HOME
REPAIR
FOR
SOUND
PROOF
ETC.

MBTA - BLUE LINE MEETING (APRIL 21, 1993) ②

M.B.T.A....

Continued from page one
tracks. That isn't much to correct a problem that has plagued my community for years. There is an entire generation that grew up here unable to listen to a radio on a summer day because of train noise. I don't want to see future generations living this way if we can prevent it now."

Senator Travaglini reiterated many of the remarks made by his legislative colleague, "I absolutely agree with the Assistant Whip. According to my math, four million is slightly more than one percent of the project's budget. As we all know from dealing with budgets such as this, that is not very much, and it rights one of the wrongs done to this community during the last four decades. I feel that of the 350 million dollars appropriated for the project, 2 million for soundproofing is not unprecedented. If our requests are not granted we will take one step further to the Secretary of Transportation. He assured the MBTA that if this part of the package is not part of the mitigation, the restoration will be very bumpy," he concluded.

Boston City Councilor At Large John Nucci agreed as well, adding the forty buses an hour from points north of Orient Heights Station that M.B.T.A. officials say will run in a flow, "would like East Boston residents to believe that" however, they will impose yet another burden with heavier traffic jams. "I do not want the people of East Boston to bare the brunt of the traffic. If the M.B.T.A. concerns are for suburban Boston commuters, then pick them up at a Revere Station and bus them to downtown Boston. I oppose the plan and will not see these people burdened. I will do everything within reason to stop the buses and forty trips per day through the streets of East Boston," he firmly stated.

Many members of the community, victims of subway tracks which border their homes and yards made several heartfelt and emotional speeches urging that the M.B.T.A. use this opportunity to correct past mistakes. One stated that she felt lucky when she could get four hours of sleep in a night. Another lifelong resident stated, "I remember Wood Island Park. Now I know the airport. For forty years East Boston has gotten nothing but junk. My house shakes with buses, trains and planes."

In one heated exchange, Representative Serra presented the M.B.T.A. board with photographs taken of the structural damage done to a house near the Blue Line tracks. The photographs showed excessive damage which is attributed to the constant rumble of nearby subway cars. At the meeting's close, the T agreed to meet the following day with Serra and Travaglini in order to extend the project's comment period. On Friday the comment period was extended by the Executive Office of Environmental Affairs. This extension will allow citizens that are concerned about environmental impacts to be able to formally comment to the Secretary of Environmental Affairs Trudy Cox.

At Serra's request on Thursday, May 6 at 1:30 p.m. Serra, Lt. Gov. Paul Cellucci and James Kerasiotes, Secretary of Transportation will be touring some homes in East Boston between Maverick Square and Wally Street.

Also in firm support that the T include soundproofing language in the renovation project was Boston City Council District One candidate, James Costello and several declared candidates.

BLUE LINE - RENOVATIONS
TIE-UP - (1993 TO 2000)
7+ YRS WORK

East Boston Sun-Transcript

WEDNESDAY, APRIL 28, 1993

CALL 284-2480

Residents fret Blue Line project hassles

Seek mitigation from noise, increased traffic

By PETER NAGLE
News Staff

EAST BOSTON — While "Plains, Trains and Automobiles" was a smash comedy movie several years ago, East Boston residents feel that a movie in the making — which could be titled "Trains and Buses" — could easily be billed as a horror flick when it comes to Orient Heights next spring. That is when the MBTA is expected to implement its recently unveiled plan to use the Orient Heights station as the terminus of the Blue Line and bus passengers from stations beyond that point to Orient Heights. That busing will not start until the major work on the Scarpia Bridge is completed, promised T officials.

The renovation, which will cost \$54 million, is part of a \$1 billion Transportation Bond Bill which was sent through the Legislature in 1991 with the help of state Rep. Emanuel "Gus" Serra (D-East Boston).

Heights residents, elected officials and concerned T abutters turned out in force at last Wednesday night's T meeting at the Orient Heights Yacht Club to urge the agency to reconsider its plans.

Even more pressing to many in the audience was the question of soundproofing mitigation for those residents directly on the line. Those Blue Line abutters concurred that four hours of sleep is the maximum they can get, because of trains rumbling until 1 a.m. and starting again at 5 a.m. They recounted horror

stories of ceilings pulling apart from frames, useless attempts at watching television and constantly interrupted telephone conversations as the four-car trains roar by.

As part of the renovation, the T will increase its present 7,600-passenger capacity to 11,400 when it switches from four- to six-car trains. Many of the near 100 residents who attended the meeting were less interested in hearing about improvements until they heard a guarantee that soundproofing would be included in the plan.

And while they did not hear that, it is known that Lt. Gov. A. Paul Cellucci, Transportation Secretary James Kerasiotes, Sen. Robert Travaglini (D-East Boston) and Serra will tour homes which may be soundproofed in the upcoming weeks.

Serra noted that "sound (deafening) is absolutely imperative to the modernization of the Blue Line. Fix it and enable us to live with dignity. It is wrong to spend \$350 million and not address the problem."

Serra said a soundproofing mitigation package could spark a new relationship between the community and T in his letter to Executive Office of Environmental Affairs Secretary Nancy Baker.

Calling the noise level "intolerable," Serra wrote "This situation has been debilitating to the area's quality of life. Certainly the modernization project will be beneficial to this area. However, the MBTA must address those needs and desires of the residents which go beyond the direct impacts of the transportation system. Such a soundproofing program could mark the beginning of a new relationship among all concerned groups."

(Continued on Page 6)

COST
\$350
Million
DOLLARS

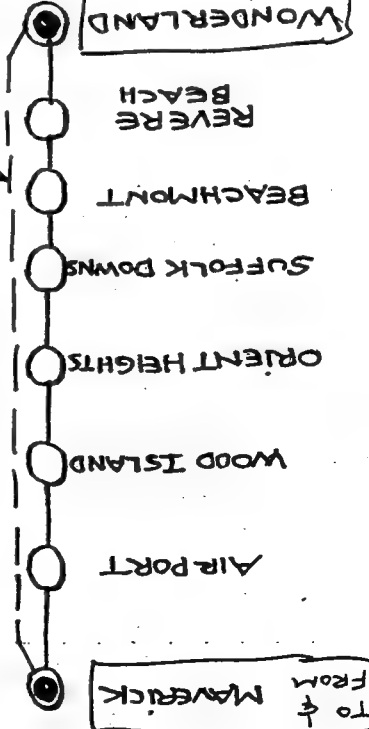
SOUND PROOF
HOMES

(1993) MBTA-BUS SERVICE
MAY 1-3, MAY 8-9, MAY 15-18
ETC

Weekend Blue Line Shut Down in May
The MBTA announced today that it will shut down the Blue Line service between Airport and Downtown Crossing stations from May 1 through May 18, 1993. The closure is necessary to allow for the construction of the new Airport station and the extension of the Blue Line to the Airport. The MBTA will provide alternate bus service for passengers traveling between Airport and Downtown Crossing stations during the closure. The closure will affect all Blue Line service, including the Airport Shuttle, which will be replaced by a bus service. The MBTA will provide a detailed schedule of the bus service on its website and at the Airport station. The closure is part of the MBTA's long-term plan to modernize the Blue Line and improve service to the Airport. The MBTA will continue to work on the Airport station and the extension of the Blue Line to the Airport. The closure will be in effect from May 1 through May 18, 1993. The MBTA will provide a detailed schedule of the bus service on its website and at the Airport station. The closure is part of the MBTA's long-term plan to modernize the Blue Line and improve service to the Airport. The MBTA will continue to work on the Airport station and the extension of the Blue Line to the Airport. The closure will be in effect from May 1 through May 18, 1993.

EAST BOSTON
MBTA STATIONS

BUS SERVICE



BLUE LINE RENOVATION

(3)



END OF THE LINE... Blue Line riders will be converging on Orient Heights station next spring when stops beyond that point are closed to accommodate for six-car trains.

(Tino Yee photo)

MBTA renovations to hike ridership

EAST BOSTON — Beginning in 1993 and running through the year 2000, the Blue Line will undergo a major renovation which will boost ridership capabilities from 7,600 passengers per hour to 11,400 passengers per hour.

That will be done primarily through the increased size of trains, which are presently run at four-car limits but will increase to six-car trains upon completion of the platform extensions.

Wood Island station, which is at 80 percent completion, according to the T's Project Manager Karen Arpino, is scheduled to be the first station to be renovated, hopefully later this year.

A \$430 million project, the Blue Line renovation will bring the almost 50-year-old system up to standards on such major problems as handicapped accessibility, increased safety at platforms and newly configured stops to enhance ridership.

Another feature of the new Blue Line will be the elimination of the Bowdoin stop near the completion of the project, around 2000. That closure will be offset by the relocation of the Government Center entrances. Bowdoin will be closed because the outbound platform cannot meet the demand of a six-car system.

(Continued on Page 6)

INCREASE
7,600 PASSENGERS
TO
11,400 PER HR.

BLUE LINE RENOVATION

6

EAST BOSTON SUN-TRANSCRIPT, WEDNESDAY, APRIL 28, 1993

• Blue Line meeting from page 1

Swift Terrace resident RoseMarie Ruggerio, whose house has been soundproofed by Massport and also is a member of the Planning and Zoning Advisory Committee (PZAC) T Subcommittee, said the procedure is a windfall.

Because the T is using public monies for the project, it must file an Environmental Impact Report (EIR) with the Executive Office of Environmental Affairs (EOEA). The EOEA then opens the process to include public comment on the project, which is where it presently stands.

T Project Manager Karen Ar-

pino noted that soundproofing could be a position of barter if residents were able to meet the Massachusetts Environmental Protection Agency (MEPA) comment period deadline. That was supposed to be Thursday, April 22, but a meeting among MEPA and T officials, Serra and Travaglini was expected to extend that deadline.

City Councilor at-large John Nucci issued his own deadline regarding the busing of commuters to Orient Heights. "It simply isn't going to work. I'm not going to let Orient Heights bear the brunt of a new North Shore line."

He suggested the T directly bus commuters to downtown Boston, thereby eliminating 40 buses per hour on Bennington St. and putting them on the Tobin Bridge.

Other complaints logged against the T were the footbridge from Bennington St. to Shea's Beach, which Pixie Palladino said is littered with graffiti, broken beer bottles and is a general eyesore.

Ron Jordan said Little League games must be ceased at the state-of-the-art Festa Field and suggested a depressing of the 2 1/2 miles of track which is above ground.

Others said that the T is not compassionate toward those who are physically challenged.

Because of the vocal nature of the crowd, T officials reverted from their original plan of showing the construction schedule for Blue Line improvements.

40 BUSES
PER HOUR
ON
BENNINGTON ST.
TO
ORIENT HTS
STATION
FOR
3 YEARS
TO COMPLETE
BEACHMONT
STATION

• MBTA plans from page 1

For one year, beginning in the spring of 1994, to adequately address the Beachmont viaduct, it will be necessary to use Orient Heights as the terminus of the line. According to T documents, shuttle buses will run twice as often as the Blue Line cars. Twenty-four buses will run a total of 40 trips per hour along the 2.3-mile route during construction and "traffic operations are expected to be acceptable along the proposed shuttle bus route."

To ensure positive traffic

flows along the route, T officials have vowed to place signallers at traffic bottlenecks, such as the already congested Orient Heights Square.

Efficiency will be improved at the Orient Heights Yard and Carhouse by new construction at both areas.

Residents who wish to formally comment on the project are required to write to Ms. Nancy Baker, Massachusetts Environmental Protection Agency, 100 Cambridge St., 20th Floor, Boston, Ma. 02202.

INCREASE PLATFORMS
4 CAR TO
6 CAR LONG

Section IV
MITIGATION COMMITMENTS

IV. MITIGATION COMMITMENTS

IV.1 CONSTRUCTION PERIOD MITIGATION

IV.1.A Management Approach and Contingency Planning

Blue Line service between Wonderland and Orient Heights stations will be suspended for a one-year period while the MBTA proceeds with modernization of the Wonderland, Revere Beach, Beachmont, and Suffolk Downs stations. The MBTA will provide several alternative services to accommodate Blue Line riders. These services include a shuttle bus service between the closed stations and improvements to other MBTA services in the Blue Line service area. Overall ridership on the Blue Line will be monitored on a monthly basis through a review of revenue generated.

From a management perspective, the MBTA will be providing several resources to address agency and public concerns as they occur during the temporary shuttle bus program.

During the project, information about the temporary MBTA service and how to use it will be prominently displayed at each Blue Line station and will be provided to local media outlets through the MBTA's Communications and Marketing Department. At the outset of the program, the MBTA will temporarily have managers or other personnel at all affected stations to provide on-the-spot responses to inquiries about project-related issues. Throughout the program, the MBTA will station an inspector or starter at Wonderland and Orient Heights Stations during operating hours to answer questions.

Furthermore, the MBTA will dedicate a direct 'hot line' for Blue Line shuttle service issues/information. Access to the

'hot line' will be via the normal MBTA information number: (617) 722-3200. In the event that 1) significant complaints occur from either the riding public or local residents, or 2) Blue Line ridership levels drop more than 25 per cent, the MBTA Operations management will review its program and make adjustments to increase ridership and reduce adverse impacts in coordination with local City of Revere and City of Boston officials. These actions may include allocating additional buses to the 440 series bus routes and providing additional shuttle bus services beyond those identified in this FEIR and more information on alternative MBTA North Shore transit services.

MBTA Operations staff indicate that few complaints have been received from previous "planned" MBTA substitute shuttle bus programs. In some instances, -- e.g. Central Transportation Planning Staff studies of the Red Line (CTPS Technical Report 34 - *An Evaluation of the Replacement Bus Service During the Reconstruction of the Red Line/Dorchester Branch*, November, 1982) and Needham Branch bus replacement services -- many riders have actually indicated they preferred the shuttle bus replacement service to the regular service. The MBTA anticipates the Blue Line replacement shuttle bus services will produce similar good results.

The MBTA Blue Line Construction Project Manager will be responsible for coordinating MBTA construction related inquiries with other MBTA departments (e.g., General Manager and Operations). During the temporary shuttle bus program, the MBTA Blue Line Project Office will handle public inquiries regarding station-related construction issues. The MBTA's policy will be to respond to inquiries as soon as possible.

The MBTA Blue Line Project Office can be reached as follows:

Telephone: (617) 722-5806

Or write to:
MBTA Construction Project Manager
Blue Line Project Office
21 Arlington Avenue
Charlestown, MA 02129

MBTA Bus Operations, as they do today, will be responsible for service contingency planning during the temporary shuttle bus program. In the unlikely event that MBTA buses are unable to travel the shuttle bus corridor due to extreme weather conditions (e.g., a major blizzard or hurricane), the MBTA's Marketing and Communications Department will make public announcements to that effect through the radio and television media outlets serving the North Shore. These announcements will recommend the use of alternative commuter rail and rapid transit services until the problem can be rectified. However, the MBTA notes that weather conditions would have to be so severe to eliminate shuttle bus services that our riders probably would be unable to access their own vehicles, let alone alternative MBTA rail services.

As discussed in the DEIR, the MBTA is prepared to continue all elements of the Blue Line replacement service plan in the unlikely event that the one-year program cannot be completed on time. Contracts for the work on the Beachmont, Wonderland, Revere Beach, and Suffolk Downs stations will be written such that contractors will be penalized in liquidated damages per day if the work is not completed on time.

Other contingency planning situations which could arise include service needs during special events. If a major special event warrants the addition of more bus

or rail service for the Blue Line service area, the MBTA commits that it will prepare for and provide an adequate number of buses or rail equipment to address the need.

IV.1.B Blue Line Train Noise Abatement

Following the publication of the DEIR, the MBTA organized and held three public meetings during April 1993 to solicit public comments on the DEIR. Meetings were held in downtown Boston, East Boston, and Revere.

During these meetings, and in written comments to the Secretary of Environmental Affairs, noise and vibration impacts were, by far, the most frequently cited public concern about the Project. Comments were all very similar and dealt with the severity of existing and future noise impacts of the Blue Line in the City of Revere and East Boston.

The DEIR indicated that Blue Line noise problems will not significantly increase when six-car trains are added following construction of the Blue Line Station Modernization Program. Nonetheless, the MBTA recognizes the magnitude of public concern about existing noise and vibration impacts on Blue Line abutters.

To address these concerns, the MBTA is committing to three major steps to ensure that feasible noise mitigation measures are implemented to mitigate adverse Blue Line noise as soon as possible.

First, the MBTA has selected a nationally-renowned noise consultant to perform a systemwide evaluation of noise and vibration impacts related to MBTA services and facilities. The MBTA is convinced that the best approach to a long term resolution of noise and vibration impact problems related to its services is to take a systematic view of the problem,

rather than make piecemeal attempts at noise mitigation.

The two-year study is commencing in fall, 1993 and will be completed by fall, 1995.

During the first year of the study, the MBTA's noise consultants will focus on identifying early action measures which can be taken to mitigate the MBTA's worst noise/vibration problems along the Blue Line. During the second year of the study, the emphasis will be on identifying and setting priorities for systemwide MBTA noise mitigation measures.

As envisioned, objectives of the systemwide noise study will include:

- 1) Identify the pros and cons of a range of cost effective measures which can be implemented either at the noise source (i.e., vehicle speed restrictions, regular wheel maintenance using wheel truing machinery and systematic testing procedures, and trackbed/rail noise reduction measures) or adjacent to the noise source (e.g., noise walls, or soundproofing of homes);
- 2) Develop a priority list of the highest noise impact areas;
- 3) Develop a priority list of the areas where objective benefit/cost criteria indicates that the greatest noise/vibration mitigation benefits can be achieved for the funds expended;
- 4) Provide an outreach information and feedback program for abutters who are most severely affected by noise and vibration impacts; and
- 5) Design and implementation of noise abatement.

Second, on July 21, 1993, the MBTA announced it has committed approximately \$8 million in capital funds (or 2 % of the capital improvement program costs) toward the implementation of noise mitigation specifically for the Blue Line under the Blue Line Station Modernization Project. Noise and vibration mitigation funds are to be coordinated with the systemwide noise study. During the first year of the study, feasible noise mitigation measures for the Blue Line will be identified for implementation. Noise mitigation funds will be expended over the life of the Project as implementation occurs.

Third, the MBTA will be developing and adopting a systemwide noise abatement policy. The policy will be developed in conjunction with the systemwide noise study consultant. As currently envisioned, the policy may include:

- ✓ Adoption of specific noise standards for levels of need and improvement for new and existing rapid transit lines;
- ✓ Dedication of a fixed proportion of new or existing line program improvement capital costs specifically to noise mitigation (in the case of the Blue Line, the fixed proportion is 2 percent);
- ✓ Contractor requirements to conduct comprehensive noise surveys at various stages of project development including, at minimum, pre-construction and full build;
- ✓ Performance of operational audits to ensure that rapid transit wheels are trued to MBTA standards, rail is profiled, and equipment is maintained at predetermined intervals to minimize operational noise;

- ✓ Identification of the noise mitigation measures to be considered in severely impacted locations (e.g., sound walls, soundproofing homes, etc.);
- ✓ Use of noise survey results to determine the most effective measures to be applied to an area.
- ✓ Provision to increase noise mitigation funds beyond the fixed proportional level in severe cases upon approval by the MBTA Board of Directors.

The MBTA believes that the preceding actions and commitments represent a significant step toward the resolution of noise and vibration problems along the Blue Line and systemwide.

IV.1.C Revised Temporary Shuttle Bus/MBTA Replacement Service Plan

Described in the DEIR, and amended in this FEIR, the MBTA commits to providing shuttle bus service between Wonderland and Orient Heights Stations and other supplemental services for a one-year period between June 1994 and June 1995 when Wonderland, Revere Beach, Beachmont, and Suffolk Downs Stations are closed temporarily to expedite station improvements. These services are intended to compensate for the temporary loss of the Blue Line service between Orient Heights and Wonderland Stations.

C.1 Startup Commitment

The MBTA commits that it will not begin either the Blue Line shutdown or the replacement service program until on-going work at the intersection of Saratoga and Bennington Streets is substantially completed and the widened Frank Scarpa bridge is once again open to traffic.

C.2 Service Level Commitment

The MBTA commits to shuttle Blue Line passengers between affected stations at a service level comparable to that provided by the Blue Line. While seeking to minimize adverse impacts on the Orient Heights area, the MBTA commits that its regular Blue Line passengers will be served adequately and minimally inconvenienced during this one year period.

Inbound shuttle buses will be free to all passengers who board at the four closed stations of Wonderland, Revere Beach, Beachmont, and Suffolk Downs and leave at Orient Heights Station. However, an 85 cent fare will be charged to passengers who leave the buses at intermediate stations (e.g., Revere Beach, Beachmont, Suffolk Downs). Similarly outbound shuttle buses will be free to all passengers who board at Orient Heights Station and disembark at any of the four closed stations. Outbound passengers who board buses at the intermediate stations will be charged an 85 cent fare.

C.3 Shuttle Bus Infrastructure Commitments

The service plan also includes provisions for on- and off-street bus operations such as designated bus loading zones, new or expanded passenger waiting shelters, and new signs as identified in Section III of the DEIR.

During the period of actual operations, the MBTA Operations Department commits that it will make necessary adjustments to the shuttle service (e.g., modify frequency of service, modify number of express buses between Wonderland and Orient Heights, modify police details) to ensure that MBTA passengers and affected circulation areas are not subjected to recurring problems.

The MBTA will provide the necessary services and infrastructure to encourage the entire affected Blue Line passenger population to use either the shuttle bus service or alternative public transit services during the one-year period.

C.4 Revisions to DEIR Replacement Service Program

In response to DEIR comments received, the MBTA revised its initial shuttle bus service program to concurrently improve and emphasize other MBTA alternative services in addition to the shuttle bus service between Wonderland and Orient Heights Stations.

C.4.1 *Revised Shuttle Bus Program*

At the outset of the program, the MBTA will allocate 34 shuttle bus trips per hour along the corridor rather than 40 bus trips per hour as described in the DEIR. The MBTA will therefore allocate a maximum of 20 buses per hour to the Bennington Street/Ocean Avenue corridor (refer to Figure IV-1 for an illustration of the shuttle bus corridor) rather than the maximum of 24 buses cited in the DEIR. This change will reduce bus traffic impacts by 15 % along the shuttle bus route.

Bus related traffic impacts along the corridor will therefore initially be reduced by approximately 15 % compared to those identified in the DEIR.

C.4.2 *Shuttle Bus Express Services*

During the program, express shuttle buses between Wonderland and Orient Heights Station will operate generally in proportion to the Blue Line ridership boarding at Wonderland station vis-a-vis boardings at the Revere Beach, Beachmont, and Suffolk Downs stations. At the present time boardings at

Wonderland Station account for 55 % of the boardings between Wonderland and Suffolk Downs Stations. Therefore, at the outset of the program, about half the shuttle buses will travel express between Wonderland and Orient Heights Stations. Express buses will travel straight along the corridor without making the left turn onto Winthrop Avenue as indicated on Figure IV.1. The MBTA will monitor the optional outbound stop proposed on Winthrop Street adjacent to the MBTA lot. Since police details will be provided at the intersection of Winthrop/Bennington/State Streets, this stop may be discontinued if it adversely affects bus operations along the shuttle bus route.

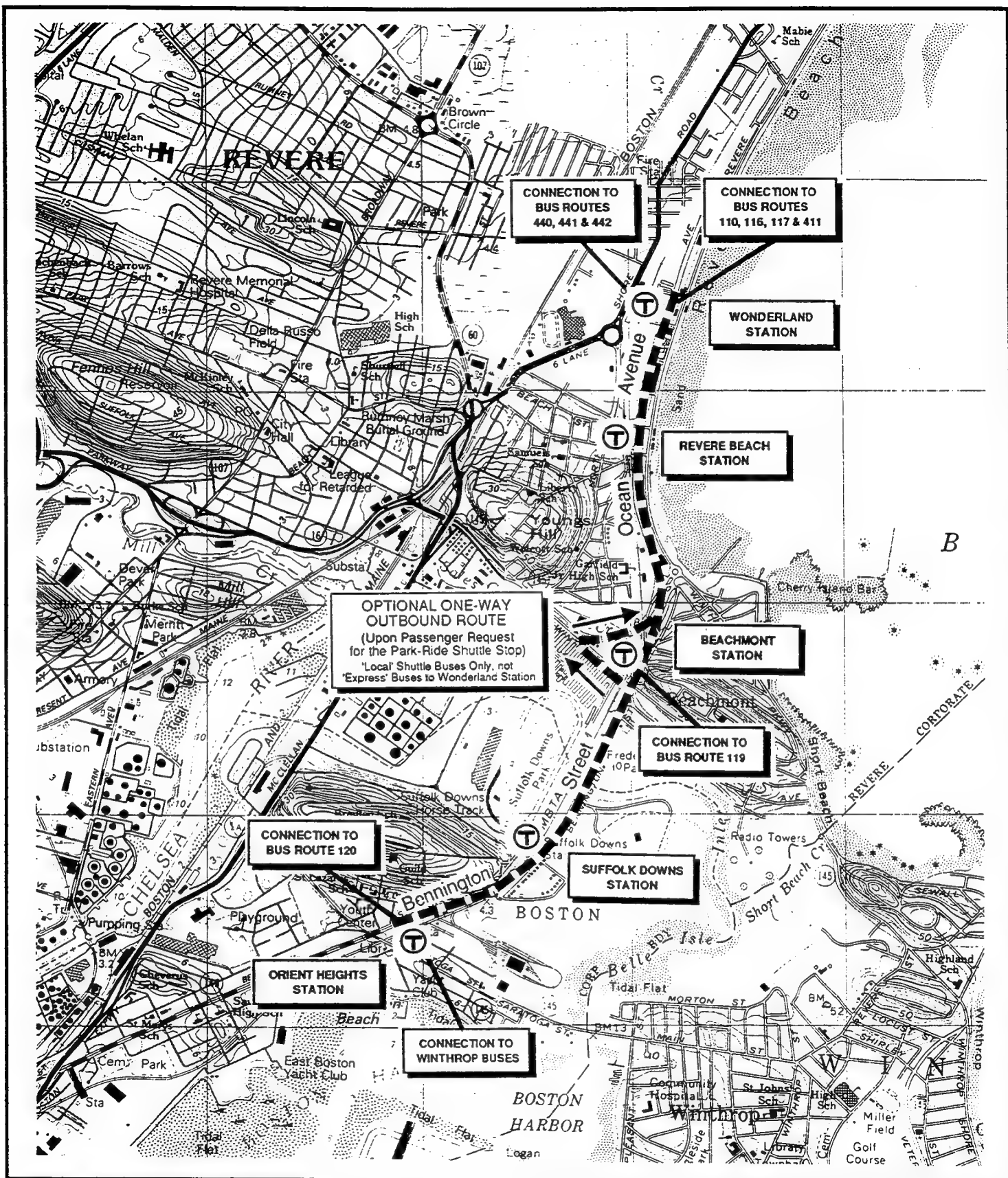
C.4.3 *Shuttle Bus Layovers*

Bus layovers will occur only at locations where they will not interfere with shuttle bus operations. Station starters and other MBTA managers will be present during peak periods to ensure that buses all have immediate access to the Bennington Street busway and do not clog Bennington Street.

C.4.4 *Orient Heights Station Area*

During the temporary shuttle program, the MBTA will modify the layout of Orient Heights Station as follows (see Figure IV.2):

- ✓ Remove a portion of the iron fence on the Bennington Street side of Orient Heights Station, temporarily relocate the toll collector's booth and install as many new temporary fare collection turnstiles as possible (i.e., 12 turnstiles vs. 5 which exist today) on the northerly end of the station's inbound platform .
- ✓ Close the existing fare collection area, but retain for emergency purposes.



SCALE = 1:25,000

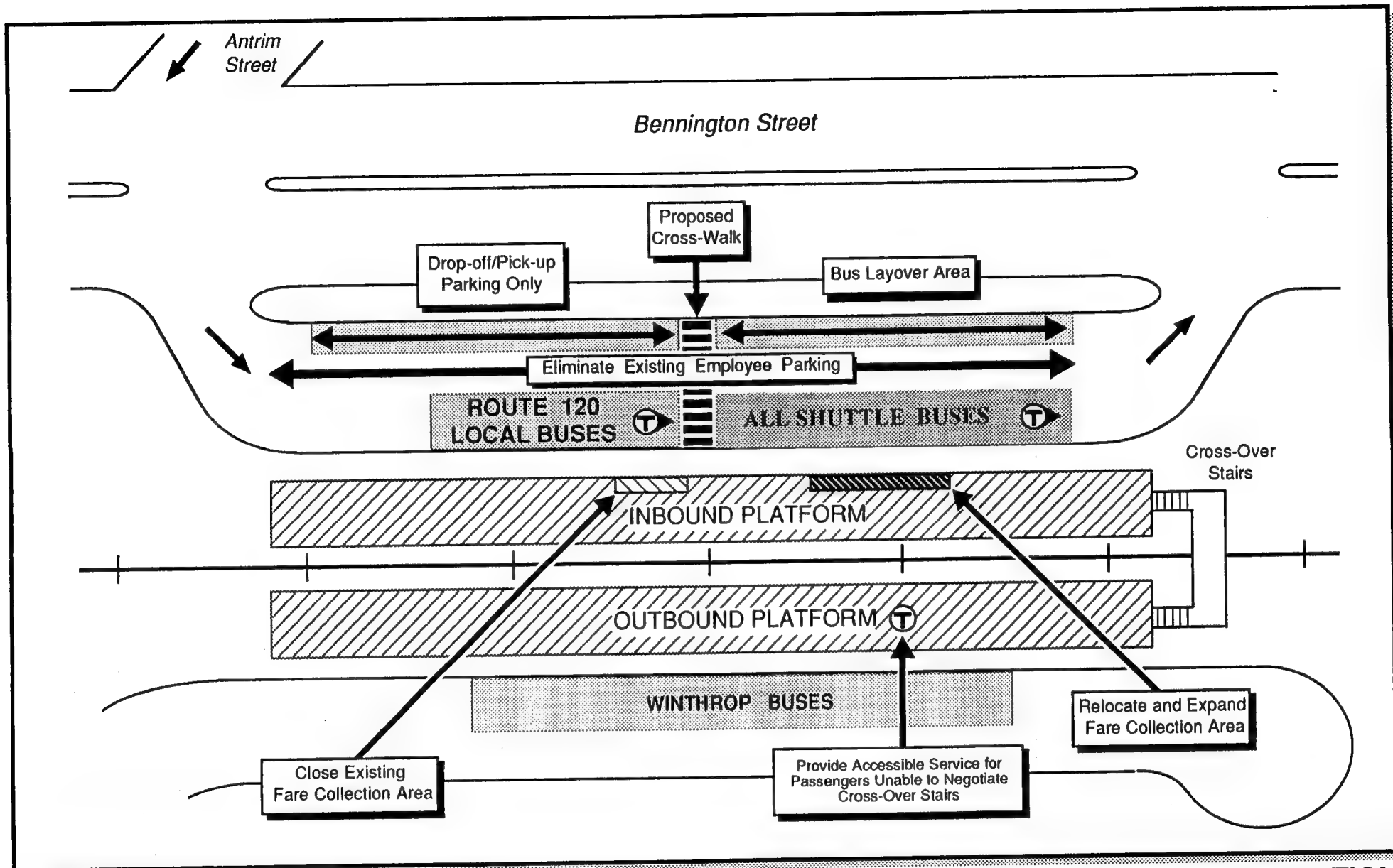
SOURCE:
U.S.G.S., Boston North & Lynn Quadrangles

WONDERLAND TO ORIENT HEIGHTS BUS REPLACEMENT ROUTE AND STATION LOCATIONS

Ⓜ Massachusetts Bay Transportation Authority

Blue Line Station Modernization FEIR

Figure IV.1



Schematic Diagram: Not to Scale

TEMPORARY ORIENT HEIGHTS STATION SHUTTLE BUS OPERATIONAL IMPROVEMENTS

Ⓣ Massachusetts Bay Transportation Authority

Blue Line Station Modernization FEIR

Figure IV.2

C.4.4 Orient Heights Station Area (Cont.)

- ✓ Locate shuttle bus stop adjacent to new fare collection area.
- ✓ At all times during the shuttle bus program, the MBTA will provide an accessible vehicle service at the Barnes Avenue bus loop adjacent to the outbound platform to pick up passengers who, for physical reasons, are unable to climb the Orient Heights station stairs to the inbound platform. The accessible vehicle will bring these passengers to the shuttle buses on the Bennington Street busway.

Should on-street parking demands increase in the Orient Heights area during the one-year replacement bus program, and only if authorized to ticket by the City of Boston, the MBTA commits to allocate a police detail to assist the City in enforcing existing on-street parking regulations in the Orient Heights station area during the one-year program. Furthermore, in the unlikely event it becomes necessary to modify on-street parking controls in the Orient Heights station area because of increased commuter parking on neighborhood streets, the MBTA commits to purchase and install such signs upon authorization from the City of Boston.

The MBTA will permit free vehicle pick-up access to the Orient Heights station commuter parking lot during the hours of 3-6 PM for passenger pick-up activities. The MBTA will obtain and post signs in the station and, if approved by the City of Boston, on local streets adjacent to the station to alert Orient Heights station users of the modifications to the passenger pick-up rules.

C.4.5 Fare Collection Assistance

During the temporary station shutdown:

- ✓ Automatic token vending machines will be installed at the Wonderland and Orient Heights Station fare collection areas.
- ✓ The MBTA mobile pass sales van will be sent to Orient Heights and Wonderland Stations at regularly scheduled times during each monthly two-week pass sales period. The MBTA will post the times that the mobile pass sales vans will be available to sell passes.

C.4.6 Improvements to Alternative Services

The MBTA one-year replacement service plan will also include the following improvements to alternative services:

- 1) The MBTA will provide and market expanded bus service on its 440 bus route series which provide service between Marblehead, Swampscott, Lynn and Downtown Boston (refer to Section II of this FEIR for a description of these services). During the shuttle bus period, the MBTA will commit 4 additional buses per hour to the 440 bus routes and will market this alternative service which is expedited to increase use of both Lynn Station/garage and Wood Island Station.
- 2) The MBTA commits to the following mitigation measures to increase the use of the Lynn station/garage and Wood Island station :
 - ✓ Keep the Lynn garage free to MBTA passengers during the shuttle bus program.
 - ✓ Market Lynn station/garage Wood Island Station services during the shutdown. The MBTA commits to regular media announcements about the Lynn Station/Wood Island Station

services. In addition, the MBTA will coordinate with the Massachusetts Highway Department (MHD) and the Metropolitan District Commission (MDC) to install four additional external trail blazing signs to the Lynn station/garage. The placement of two temporary external signs -- in advance of and at the Lynn garage entrance -- on Route 1A will be coordinated with the MHD. Similarly, the placement of two temporary signs on the Lynn Shore Drive -- in advance of and at the intersection with Market Street -- will be coordinated with the MDC. The MBTA will place signs inside the Lynn garage to direct patrons to park in areas most convenient to the services they are using.

C.4.6 Police Details To Assist in Control of Traffic

The replacement shuttle bus service program includes provisions for police details to address bus and passenger circulation requirements at affected stations. During the temporary shuttle bus program, the MBTA will, with authorization from the cities of Boston or Revere, provide police details to control traffic at key area intersections and at locations where pedestrian street crossings or bus traffic impacts are expected to increase. At this time, the MBTA envisions police details will be assigned to the following locations during the hours indicated:

- Wonderland Station exit to Ocean Avenue: one detail from 6 AM-10 AM and from 3 PM-7 PM.
- Beachmont Station at the intersection of Winthrop/Bennington/ State Road: two details from 6 AM-7 PM (i.e., during all construction hours).
- Suffolk Downs Station entrance: one detail from 3 PM-7 PM

- Orient Heights Station busway entrance to the MBTA Orient Heights Station busway: one detail from 6 AM-10 AM and from 3 PM-7 PM.
- Orient Heights Station area, Bennington at Saratoga Streets intersection: one detail from 6 AM-10 AM and from 3 PM-7 PM.

IV.1.D Construction Period Noise Mitigation (Equipment and Service)

D.1 Temporal Construction Restrictions

Orient Heights and Beachmont Stations directly abut residential areas. As such, construction noise abatement is particularly important at both stations. To minimize adverse construction noise impacts on residents adjacent to the Orient Heights and Beachmont Stations, construction activities will generally be limited to daytime hours between 7 AM and 7 PM.

Exceptions to this restriction will be relatively short duration construction activities pertaining to track, power, and signaling at Orient Heights Station only, since it will remain open throughout the Blue Line Station Modernization Project.

D.2 Construction Noise Abatement

Construction noise mitigation will conform to all applicable MBTA, U.S. Environmental Protection Agency, City of Boston, and City of Revere standards.

For construction noise abatement, City of Boston Standard Specification 439.0 (or subsequent modifications) and its subsections 439.1-439.6 will apply. Table IV-1 summarizes construction noise abatement standards.

Equipment used at each of the station sites will not exceed the noise levels in A-

weighted decibels at 50 feet from the equipment under test.

Table IV-1

**Construction Equipment
Maximum Noise Levels Allowed
(Source: City of Boston)**

<u>Equipment</u>	<u>A-weighted Decibels (dBA)</u>
<u>Earth moving</u>	
Front Loader	75
Backhoes	75
Dozers	75
Tractors	75
Scrapers	80
Graders	75
Truck	75
Paver	80
<u>Materials Handling</u>	
Concrete Mixer	75
Concrete Pump	75
Crane	75
Derrick	75
<u>Stationary</u>	
Pumps	75
Generators	75
Compressors	75
<u>Impact</u>	
Jack hammers	75
Rock drills	80
Pneumatic tools	80
Pile driver	95
<u>Other</u>	
Saws	75
Vibrators	75

Individual Blue Line station construction contractors will be required to comply with applicable Federal, State, and local

laws -- particularly the Occupational Safety and Hazards Administration (OSHA) "Occupational Noise Exposure", 1910.95 -- relative to noise control.

In addition, short-term and long-term noise sound levels from mobile construction equipment monitored by the Contractor at the building line of affected structures (primarily residences) affected by individual station construction activities will not exceed the following:

Short Term (non-scheduled or intermittent) Daily L_{dn} (day-night noise equivalent level) including Sundays and Legal Holidays, all hours -- a maximum of 85 dBA

Long Term (repetitively scheduled or relatively long term) Daily L_{dn} including Sundays and Legal Holidays, all hours -- a maximum of 70 dBA.

Each station contractor will be required to provide sound deadening devices and take appropriate noise abatement measures which could include, but not limited to, the following:

- 1) Provide shields or other physical barriers to restrict the transmission of noise.
- 2) Provide soundproof housings or enclosures for noise producing machinery.
- 3) Provide efficient silencers on air intakes of equipment.
- 4) Provide efficient intake and exhaust mufflers on internal combustion engines.
- 5) Conduct truck loading, unloading and hauling operations so that noise is kept to a minimum.

IV. MITIGATION COMMITMENTS

Blue Line Station Modernization FEIR

- 6) Ensure the routing of equipment and vehicles over streets that will cause the least disturbance to residents in the vicinity of the work.
- 7) Ensure that each station's site engineer approves siting of stationary equipment.

The MBTA will require construction contractors at the Boston Blue Line stations to cooperate with the City of Boston Air Pollution Control Commission. Each contractor will be required to monitor noise levels throughout the life of each station contract in accordance with Air Pollution Control District requirements. If field measurements during construction reveal sound levels exceeding those listed above for mobile construction equipment, any affected station contractor will be required to cease operating such equipment and to repair it or replace it with equipment that complies with applicable threshold sound levels.

Construction at MBTA stations within the City of Revere will use measures similar to those listed above.

IV.1.E Traffic/Pedestrian Impact Mitigation - Downtown/East Boston MBTA Stations

The MBTA commits to minimizing temporary and permanent adverse impacts on downtown traffic and pedestrian circulation due to construction of the new headhouses at the downtown State and Government Center Stations and all East Boston stations.

The MBTA commits to work with the Boston Transportation Department (and other City of Boston agencies) to resolve concerns raised about impacts associated with the closure of Bowdoin Station and the proposed new headhouse locations at Government Center and State Stations.

MBTA Blue Line Station Modernization Program construction activities related to these stations were described in the DEIR and are incorporated by reference.

As discussed in the DEIR, the MBTA has established an MBTA CA/THT coordination unit. This unit has three coordination activity functions: 1) It ensures, on a day-to-day basis, the protection of MBTA facilities and services which may be affected by CA/THT construction activities; 2) It ensures that a regional transit mitigation plan to minimize traffic impacts of CA/THT construction is coordinated with the CA/THT Project; and 3) It ensures that the MBTA will work cooperatively with the CA/THT team to seek construction opportunities to enhance improvements to transit facilities and minimize adverse impact.

Blue Line Station construction activities at Bowdoin, State, and Government Center stations which will either be affected by or will affect CA/THT construction, as well as construction activities at Wood Island and Airport stations, will be coordinated with the CA/THT Project and the City of Boston's CA/THT Project team through the MBTA's CA/THT coordination unit.

As design phases of downtown and East Boston stations progress, as it has in the past, the MBTA will work closely with the Boston Transportation Department to minimize impacts that construction staging will have on the pedestrian flow and vehicle operations on City of Boston streets. The MBTA will obtain BTDC concurrence on all construction traffic sequencing plans related to City of Boston Blue Line Stations prior to construction.

The MBTA commits to provide adequate pedestrian walkways and corner crossing areas at all downtown Boston station

construction sites to minimize pedestrian congestion and ensure safe street crossings throughout construction.

IV.1.F Disposal of Construction Debris and Recycling Efforts During Construction

Relatively small amounts of construction debris will be created due to the Blue Line Station Modernization Program. Individual station construction contractors will be responsible for construction debris disposal and recycling. The MBTA will require contractors to recycle construction debris which has a market for recycling. For example, granite curbs will be stacked and reused if salvageable. With all the construction-related fill available from the Central Artery/Third Harbor Tunnel Project, there may not be a market for the relatively small volume of earth fill which is to be removed for this Project.

Following is a summary estimate of projected station-by-station construction debris provided by the architect/engineer for each station addressed in this EIR (recyclable and partially recyclable materials are noted):

Wonderland:

- ✓ 80 cubic yards (cy) of earth fill for platform extension foundations (recyclable).
- ✓ 20 cy of building debris including brick, terra-cotta masonry, tile, and steel (partially recyclable).
- ✓ 50 pounds of domestic waste per construction day (partially recyclable).

Beachmont Station:

- ✓ 2,000 cy of building debris including brick, terra-cotta masonry, tile, and steel (partially recyclable).
- ✓ 20 cy of soil fill (recyclable).
- ✓ 100 pounds of domestic waste per construction day (partially recyclable).

Suffolk Downs Station:

- ✓ 20 cy of building debris including brick, terra-cotta masonry, tile, and steel (partially recyclable).
- ✓ 20 cy of soil fill (recyclable).
- ✓ 100 pounds of domestic waste per construction day (partially recyclable).

Orient Heights Station:

- ✓ 4,000 cy of building debris including brick, terra-cotta masonry, tile, and steel (partially recyclable).
- ✓ 300 cy of soil fill (recyclable).
- ✓ 100 pounds of domestic waste per construction day (partially recyclable).

Maverick Station:

- ✓ 4,000 cy of building debris including brick, terra-cotta masonry, tile, and steel (partially recyclable).
- ✓ 2,500 cy of soil fill (recyclable).
- ✓ 100 pounds of domestic waste per construction day (partially recyclable).

State Station:

- ✓ 1,240 cy of concrete (partially recyclable).
- ✓ 7,800 cy of soil (recyclable).
- ✓ 320 cy of building debris including brick, terra-cotta masonry, tile, and steel (partially recyclable).
- ✓ 880 square yards of temporary steel plates (recyclable).
- ✓ 100 pounds of domestic waste per construction day (partially recyclable).

Government Center Station:

- ✓ 50 cy of concrete (non-recyclable).
- ✓ 30 linear feet of granite (recyclable).
- ✓ 600 cy of fill soil (recyclable).
- ✓ 30 cy of building debris including brick, terra-cotta masonry, tile, and steel (partially recyclable).
- ✓ 3000 square feet of brick (partially recyclable).
- ✓ 100 pounds of domestic waste per construction day (partially recyclable).

IV.1.G Construction Dust and Rodent Control Measures

The MBTA will be preparing detailed dust and rodent control plans in compliance with local and state regulations prior to the issuance of bid packages for work at each of the stations addressed in this EIR.

Dust and rodent control measures at stations within the City of Boston will be

subject to concurrence by the City of Boston. Similar measures at the Blue Line stations within the City of Revere will be subject to concurrence by the City of Revere.

This subsection refers to general construction dust, and rodent control mitigation measures to be taken at those stations to remain open for the duration of the Blue Line Station Modernization Program.

Of the stations addressed in this EIR, those that will remain open throughout the Station Modernization Program include:

- ✓ Government Center Station
- ✓ State Station
- ✓ Maverick Station
- ✓ Orient Heights Station

All are located within the City of Boston. Following is a summary of the dust abatement, and rodent control mitigation measures which will be used at each of these stations.

G.1 Dust Control

'Fugitive' dust is airborne particulate matter, generally of a rather large particulate size. Two types of fugitive dust control will be provided during the Blue Line Station Modernization Program -- open air and interior station dust control measures. The excavation phase of station modernization construction at Government Center, State, and Maverick Stations has the potential to generate fugitive dust.

Temporary walls or curtains will be constructed prior to all cut and cover excavation activities at each of these three stations. Dust control will comply with all applicable MBTA, and U.S. Environmental Protection Agency, and City of Boston standards and regulations.

G.1.1 Open Air (external)

Within the City of Boston, Standard Specification Items 440 and 443 apply to maintaining open air roadway dust control. Depending on individual circumstances, calcium chloride or water may be used to mitigate roadway dust.

Calcium Chloride

Calcium chloride will conform to the requirements of American Association of State Highway and Transportation Officials designation M144, Type I or Type II. It will be uniformly applied at a rate of 1.5 pounds per square yard, or at any other rate as directed by the Engineer at each station by means of a mechanical spreader, or other approved methods.

Water

Water will be applied only at locations and such times as directed by the Engineer at each station. Watering equipment will consist pipelines, tanks, tank trucks, or other devices capable of applying a uniform spread of water over the surface, and approved by the Engineer at each station. A suitable device for a positive shut-off and for regulating the flow of water shall be located so as to permit positive operator control.

G.1.2 Station (internal)

Station Passenger Protection

Dust generated within the State, Government Center, and Maverick stations will be controlled by enclosing areas where dust will be generated. Equipment will be installed to control air pressure in such a manner to keep dust from escaping into passenger waiting areas in accordance with applicable MBTA, Environmental Protection Agency, and City of Boston standards.

G.2 Rodent Control

Written into all MBTA Blue Line station construction contracts, in accordance with Massachusetts State Sanitary Code Chapter II, 105 CMR 410.550 and under Section 108.6 of the State Building Code, a certificate of rodent extermination will be obtained related to excavation, demolition, foundation, and below grade construction activities at State, Government Center, and Maverick stations within the City of Boston. The certificate will indicate that extermination work was carried out before, during, and at the completion of the preceding construction activities.

With the written approval of the owners, extermination baiting will be provided at the exteriors of any buildings affected within 300 feet of the excavation and eligible construction activities.

Licensed exterminators will be required to indicate by two inspections before and during construction activity, respectively, that no rodent activity is identified. Compliance with this policy will be monitored by the Rodent Control Unit of the Inspectional Services Department of the City of Boston.

IV.1.H Commitment to Continue Station Headhouse Design Coordination Efforts Through Final Design

The MBTA agrees to work closely with the Massachusetts Historical Commission through the Section 106 process and affected City of Boston agencies to identify the appropriate materials and new headhouse designs consistent with the built environment in the area of each City of Boston Blue Line station addressed in this EIR. Similarly, while the vast majority of design issues in the City of Revere have been resolved, the MBTA commits to continue working with the

City of Revere to address unresolved design issues pertaining to its stations in the City of Revere.

The MBTA recognizes that in particular there are several unresolved issues pertaining to headhouse designs for the State, Government Center, and Maverick stations. The MBTA has already embarked on a process of coordination with the City of Boston agencies to resolve these issues. The MBTA agrees to work with all affected City of Boston agencies to achieve mutually acceptable resolution to these design issues.

IV.1.I Commitment to Minimize Adverse Pedestrian Impacts During Construction

The MBTA views adequate pedestrian circulation as a vital component of construction sequencing at all of our Blue Line stations. The MBTA commits to work with the Boston Transportation Department and the City of Revere to ensure that construction sequencing does not adversely impact safe pedestrian circulation.

The MBTA commits to develop detailed maintenance of traffic/pedestrian flow plans when design resumes for the State and Government Center station headhouses. At that time, the MBTA will present draft maintenance of traffic/pedestrian flow plans to the BTD for review and concurrence prior to construction.

I.1 Government Center

During construction of the proposed new headhouses, the MBTA will maintain minimum 10-foot wide pedestrian walkways on both the Two Center Plaza and City Hall Plaza sides of the street to ensure that adequate pedestrian walkways are provided throughout the construction

sequences for the new Government Center station headhouses.

I.2 State

After re-evaluating the impacts that the five proposed State construction sequences will have on pedestrian flow, the MBTA concludes that the northeast, southeast, and northwest corners of the State/Congress Streets intersection must be kept open and clear throughout the construction sequences. When design continues, the MBTA will require the Joint Venture to revise construction sequence plans so that a minimum corner clear zone 10 linear feet in each direction from the convergence of curb lines will be provided between the hours of 5 AM and 11 PM (Refer to Section II for an illustration of the proposed pedestrian clear zone area at intersection corners). With these minimum pedestrian clear zones, pedestrian levels of service are not expected to fail during typical weekdays. This action is needed to avoid forcing pedestrians to encroach into the direct line of either Congress or State Street traffic while crossing the intersection.

Observations indicate that the crosswalk on the west side of Congress Street has the lowest volumes of the four crosswalks at the intersection. While crossings on this particular crosswalk have not been included in this analysis, observations indicate existing volumes operate at LOS A and will continue to do so throughout construction, assuming the pedestrian corner and after the proposed State station improvements and new headhouses are constructed. Pedestrian volumes in this crosswalk will be unaffected after this project is completed.

IV.1.J - Utility Coordination /Maintenance of Service Commitment

The MBTA commits that during the construction of the Blue Line Station Modernization Program, it will adopt the following guidelines:

- 1) Relocation of affected utilities will be designed in full cooperation with all affected utilities, commissions, authorities, and agencies.
- 2) Continuous, uninterrupted, service will be provided during construction including the necessary relocation of systems.
- 3) Emergency procedures will be established by the MBTA and submitted to affected utility providers to ensure timely action on any system affected by the Project.
- 4) Affected utility conduits/pipes which require relocation as part of the Project will be upgraded or replaced if necessary to achieve a service level comparable to existing utility service.

The MBTA also commits to coordinating utility impact with all affected utilities and providing them with preliminary and final design plans for review and concurrence.

In compliance with State laws, Dig Safe will be contacted prior to excavation activities related to the Blue Line Station Modernization Program.

IV.2 POST-CONSTRUCTION MITIGATION

IV.2.A Annual Review Priority for Funding Red Line-Blue Line Connector

With the exception of adverse impacts on certain Bowdoin Station passengers who must walk further to access the

Government Center Station as discussed in the DEIR, additional analysis of pedestrian flow in the vicinity of Government Center and State stations documented in this FEIR indicates that long term impacts of these new headhouses will be beneficial not only to special needs passengers who require full station accessibility, but to pedestrian flow around both stations.

For the affected Bowdoin Station passengers, the MBTA commits to conduct an annual review of the priority for the Blue Line/Red Line Connector and seek funding in relation to other service priorities.

IV.2.B Station Headhouse Maintenance

The MBTA will assume full responsibility for normal maintenance of its existing and future Blue Line station headhouses. The MBTA has met with, and continues to meet with, City agencies regarding station headhouse maintenance issues. The MBTA commits to continue the process of working closely with City agencies to resolve headhouse maintenance issues.

The MBTA System Services Department is responsible for administering agreements with private contractors to ensure that station entryways and interiors are clean and free of trash and debris. The MBTA Department of Real Estate Management is responsible for administering station concessions agreements with private contractors.

The MBTA System Services and Real Estate Management Departments, in conjunction with the General Manager's Office, continuously reviews standard operating procedures for private contractors. The MBTA welcomes City suggestions on how station maintenance procedures can be modified to benefit City as well as MBTA. The MBTA

commits to working with the City of Boston's Real Property Department to resolve existing and future joint issues regarding station headhouse maintenance procedures and activities.

**B.1 Commitment to Adhere to Adopted
Station Headhouse
Cleaning/Maintenance Procedures**

Station cleaning contracts are issued in two year intervals with a one-year option for renewal. Station cleaning procedures at the new Blue Line headhouses are therefore subject to periodic change. The MBTA commits to adhering to procedures in effect over the life of the Project. Typical current station cleaning policies and procedures include, for example:

- ✓ Inspect and clean stairs to the downtown headhouses a minimum of 2-3 times per day to keep them clear of debris including snow and ice. Address snow and ice conditions as they occur.
- ✓ Keep walks to the downtown headhouses clear of snow, ice and other debris adjacent to each headhouse on a location by location basis. It is the MBTA's policy to keep direct wheelchair access to the station clear of snow, ice, and debris from the nearest curb cut or bus stop, whichever is closest.
- ✓ Remove graffiti from headhouses as soon as possible after discovery, usually within 24 hours.
- ✓ Provide trash receptacles at each station headhouse. It is the responsibility of the private station cleaning contractor to empty the receptacles when filled or at the end of each service day, whichever comes first.

B.2 Station Concessions Commitments

The MBTA Department of Real Estate specifies concession hours of operation and maintenance requirements. Because concessions are located within MBTA station headhouses, it is necessary to divide maintenance responsibilities between concession contractors and maintenance contractors. Concession contractors are responsible for wastes generated within their lease areas only. Station cleaning contractors are responsible for the removal of all other station headhouse wastes and cleaning activities. Presently, there are no restrictions on the delivery of concession-related goods. The MBTA commits to continue working closely with City agencies to resolve those aspects of concessions operations which are of concern to them.

IV.2.C Provide Park-Ride Improvements

It is the MBTA's policy to increase long term Blue Line ridership to achieve regional air quality and congestion. The MBTA conducted a study of potential Blue Line park-ride improvements in 1990. Short-term recommendations from the study, entitled *Blue Line Parking Improvements Study* (Gannett Fleming Engineers and Planners, August 1990) were implemented at Wonderland Station. These improvements involved resurfacing the entire parking area. The available amount of parking at the station was increased through restriping and enlargement of the MBTA parking areas.

The MBTA commits to follow up on the major long-term recommendation contained in the *Blue Line Parking Improvements Study*. The study recommended the MBTA pursue possible parking deck improvements at Wonderland and Beachmont stations. On the basis of comments received on the DEIR, it appears as though the

consideration of a future parking deck at Beachmont Station is not as viable an option as the possible construction of a parking deck or garage at Wonderland Station.

The MBTA regularly pursues park-ride improvements at rapid transit and commuter rail stations under its Park-Ride Improvements Program. Pending the availability of future funds for park-ride improvements, the MBTA commits to resolving Blue Line parking shortages in a timely manner.

To reduce Blue Line park-ride demands in the long term, the MBTA commits to increase the marketing of its alternative feeder bus services to the Blue Line.

During the construction phase of Blue Line improvements, the MBTA, as noted previously, will market and provide incentives to increase use of the 1,000 space Lynn garage. The MBTA commits to review these temporary measures for possible continuation in the long term. Full use of the Lynn garage will address the major proportion of the potential future parking shortage along the Blue Line project corridor (estimated at \pm 1,210 parking spaces on the basis of Central Transportation Planning Staff projections contained in the 1990 *Blue Line Parking Improvements Study*).

Appendix
FEIR DISTRIBUTION LIST

Ⓜ Massachusetts Bay Transportation Authority
Blue Line Station Modernization FEIR

*MBTA Blue Line
Station Modernization Project*

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Arlington, MA 02174

Massachusetts Highway Department
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Boston Conservation Commission
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Boston, MA 02201

Boston Redevelopment Authority
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Association for Public Transportation, Inc.
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Boston Area Bicycle Coalition
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